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UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

SAN JOSE DIVISION

GPNE Corp.,	)	Case No.: 12-CV-02885-LHK
	)	and Related Case Nos. 12-CV-03055-
Plaintiff,	)	LHK, 12-CV-03056-LHK, and 12-CV-
v.	)	03057-LHK
	)	
Apple, Inc., Amazon.com, Inc., Nokia Corp.,	)	
Nokia Inc., Pantech Co. Ltd., and Pantech	)	ORDER CONSTRUING CLAIMS
Wireless, Inc.	)	
	)	
Defendants.	)	
	)	

Plaintiff GPNE Corp. ("GPNE") brings this action for patent infringement against

Defendants Apple Inc. ("Apple"), Amazon.com, Inc. ("Amazon"), Nokia Corp and Nokia Inc.

("Nokia") and Pantech Co. Ltd. and Pantech Wireless, Inc. ("Pantech") (collectively,

"Defendants"). The parties now seek construction of nine disputed terms used in the claims of the

following patents-in-suit: U.S. Patent Nos. 7,555,267 ("'267 Patent"), 7,570,954 ("'954 Patent"),

and 7,792,492 ("'492 Patent") (collectively, "Patents").[1]

I.   BACKGROUND

     A.   Background and Description of the Invention

The Patents in in this matter claim priority to a June 1994 application. *See* '267 Patent,

Related U.S. Application Data (stating that the '267 Patent is a continuation of several previous

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[1] The '267 Patent is attached as Exhibit A to the Declaration of Steven W. Hartsell, ECF No. 69-1.
The '954 Patent is attached as Exhibit B. The '492 Patent is attached as Exhibit C.

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1   applications, the first of which is a divisional of "application No. 08/264,973, filed on Jun. 24

2   1994, now Pat. No. 5,542,115"); '954 Patent (same); '492 Patent (same). The June 1994

3   application, which is now Patent No. 5,542,115, pertains to "[a] two-way paging system [which]

4   utilizes four local frequencies for transmissions between pager units (**22**) and a central control

5   station (**20**)." *See* Declaration of Christopher O. Green in Support of Defendants' Claim

6   Construction Brief, ECF No. 72-1 ("Green Decl."), Ex. 1 ("'115 Patent"), Abstract (emphasis in

7   original). The instant Patents each share the same specification, and this specification is nearly

8   identical to the '115 Patent's specification. *See* '267 Patent; '954 Patent;'492 Patent; '115 Patent.

9   As set forth in the specification for the Patents, the "invention pertains to communications

10   paging, and particularly to two-way paging method and apparatus." *See* '267 Patent at 1:32-33; *see*

11   *also id.* at 1:66-67 (describing "[a] two-way paging system [that] utilizes four local frequencies for

12   transmissions . . . ."); *id.* at 14:14-15 ("[T]he invention provides a two-way paging system . . . .").

13   The specification describes the use of "four local frequencies for transmissions between pager units

14   and a central control station." *Id.* at 1:66-2:1. As set forth in the specification, frequencies one and

15   two are used to transmit downstream, from the control station to the paging unit, while frequencies

16   three and four are used to transmit upstream, from the paging unit to the control station. *See id*. at

17   1:66-2:9.

18   Turning to the claims in the Patents, the '267 Patent includes claims directed towards

19   apparatuses which the claims refer to as "node[s]." For example, the '267 Patent claims:

20   1. A first node in a data network, the data network including a plurality of nodes including a
        first node, the first node comprising:

21   at least one processor;

22   a memory providing code to the least one processor; and

23   an interface controlled by the least one processor to:

24   transmit a random access request signal in a first slot, the random access request signal
            including information that allows determination that the first node requires an allocation

25   of resources to transmit a reserve access request signal;

26   receive a first grant signal subsequent to transmission of the random access request signal,
            said first grant signal including information relating to an allocation of a second slot to

27   the first node for transmitting the reserve access request signal for transmitting first data
            packets containing a message;

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…

See id. at 14:60-15:21.

The '267 Patent also includes several claims directed towards "controller[s]." For example, the '267 Patent claims:

25. A controller in a network including a plurality of nodes, the controller comprising:

at least one processor;

a memory providing code to the at least one processor; and

at least one interface controlled by the at least one processor to:

receive a random access request signal transmitted by a first node in the plurality of nodes in a first slot, the random access request signal including information that allows the controller to determine that the first node requires an allocation of resources to transmit a reserve access request signal;

transmit a first grant signal subsequent to receipt of the random access request signal, said first grant signal including information relating to an allocation of a second slot to the first node for transmitting the reserve access request signal for transmitting first data packets containing a message;

receive the reserve access request signal from the first node subsequent to transmission of the first grant signal;

transmit a second grant signal subsequent to receipt of the reserve access request signal from the first node, said second grant signal including information related to an allocation of additional resources to the first node for transmitting the first data packets, said second grant signal including information related to a third slot wherein a second node may transmit a request signal; and

receiving first data packets from the first node subsequent to transmission of the second grant signal, wherein the first data packets are received from the first node during reception of a request signal from the second node provided in a third slot.

Id. at 16:64-17:30.

The '954 and '492 Patents also include claims for nodes and controllers. *See* '954 Patent at 17:34-50 (Claim 12 for "communication controller"); *id.* at 17:58-18:15 (Claim 23 for "[a] first node"); '492 Patent at 15:41-16:15 (Claim 2 for "[a] first node"); *id.* at 16:58-17:33 (claiming "[a] controller").   The '954 and '492 Patents additionally include various method claims which are generally directed towards methods for conducting communications between the claimed nodes and controllers. For example, the '492 Patent claims:

1. A method of operating a data communication system, the data communication system including at least a first communication controller and at least a first node, the method comprising:

transmitting a random access connection request signal from the first node to the first

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communication controller in a first slot indicating that the first node can receive messages transmitted from the first communication controller;

receiving a connection request response signal from the first communication controller transmitted to the first node in response to the random access connection request signal, said connection request response signal providing information indicating that the first node can transmit a reserve access request signal in a second slot in order to subsequently transmit a message to the first communication controller;

receive an aligning signal which enables the first node to transmit the reserve access request signal;

transmitting the reserve access request signal in the first slot in response to the connection request response signal from the first communication controller;

receiving a grant signal from the first communication controller subsequent to transmission of the reserve access request signal, said grant signal including information indicating resources have been allocated for transmission of message data packets to the first communication controller;

transmitting the message data packets from the first node in response to the grant signal;

wherein the message data packets comprise multiple data packets, wherein at least one [sic] the message data packets contain information related to a count value, wherein the final data packet from the multiple data packets contains terminal indication information indicating that termination of the message data packets has occurred;

wherein a subsequent reserve access request signal from a second node provided in a third slot assigned to the second node can be transmitted during transmission of the message data packets by the first node; and

wherein the aligning signal is received on first frequency, the reserve access request signal is transmitted on a second frequency, the grant signal is received on a third frequency and the message data packets are transmitted on a fourth frequency, wherein the first frequency, the second frequency, the third frequency and the fourth frequency are differing frequencies, wherein the aligning signal is distinct from the first grant signal.

Id. at 14:59-15:40.

B.   Claim Terms at Issue

In the parties' Joint Claim Construction Statement, the parties identified nine claim terms to be construed:

1. "node";

2. "frequency";

3. "randomly generated information";

4. "count value";

5. "providing code to";

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6. "first grant signal including information relating to an allocation of a second slot to the first node for transmitting the reserve access request signal";

7. "interface [configured/controlled] by the at least one processor to [functional language]";

8. "allocation of additional resources for transmitting the data packets/allocation of additional resources for transmitting the first data packets";

9. "clocking signal"

See ECF No. 66 ("Joint Claim Construction Statement" or "JCCS") at 4.[2]

A.   Procedural Background

On July 1, 2011, GPNE filed a Complaint in the District of Hawaii against each of the Defendants, as well as Barnes & Noble, Sharp Company, and several other Defendants. *See GPNE v. Amazon.com, Inc.*, Case No. 11-CV-00426-JMS-RLP (D. Haw. 2011). Subsequently, the District Court in Hawaii severed the GPNE's cases against each of the Defendants in the Hawaii action and transferred several of the separate actions to the instant Court. *See id.*, ECF Nos. 246, 295; *GPNE Corp. v. Nokia Corp.*, Case No. 12-CV-00250-SOM-RLP, ECF No. 14; *GPNE Corp. V. Pantech Co., Ltd. and Pantech Wireless, Inc*., Case No. 12-CV-00251-SOM-RLP, ECF No. 10. After the actions against the instant Defendants were transferred to the Northern District of California, this Court related the cases. *See GPNE v. Apple, Inc.*, Case No. 12-CV-2885-LHK-PSG, ECF No. 35[3] (N.D. Cal. 2012).

On April 15, 2013, GPNE filed its Opening Brief on Claim Construction. ECF No. 69 ("Opening Br." or "Opening Brief"). On April 29, 2013, Defendants filed their joint responsive Claim Construction Brief. *See* ECF No. 72 ("Responsive Brief" or "Resp. Br."). On May 10, 2013, GPNE filed its Reply Brief. *See* ECF No. 75 ("Reply Brief" or Reply Br."). The Court held

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[2] In the Joint Claim Construction Statement, the parties also identified four terms upon whose construction the parties agree. Specifically, the parties agree that the term "downstream" should be construed as "in the direction from controllers to nodes"; the term "upstream" should be construed as "in the direction from nodes to controllers"; and the term "simultaneous with" should be construed as "at the same time." JCCS at 3. In addition, the parties have agreed that the construction of the term "aligning signal" should be the same as the construction for "clocking signal," which the parties have identified for construction by the Court. *See id*. The Court hereby adopts these constructions.
[3] All future references to Docket Numbers refer to Case No. 12-CV-2885 unless otherwise specified.

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1   a tutorial and claim construction hearing on June 6, 2013 ("*Markman* hearing").

2   **II.   LEGAL STANDARD**

3   Claim construction is a question of law to be determined by the court. *Markman v.*

4   *Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370

5   (1996). "Ultimately, the interpretation to be given a term can only be determined and confirmed

6   with a full understanding of what the inventors actually invented and intended to envelop with the

7   claim." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc) (internal quotation

8   marks and citation omitted). Accordingly, a claim should be construed in a manner that "stays true

9   to the claim language and most naturally aligns with the patent's description of the invention." *Id.*

10   In construing disputed terms, a court looks first to the claims themselves, for "[i]t is a

11   'bedrock principle' of patent law that 'the claims of a patent define the invention to which the

12   patentee is entitled the right to exclude.'" *Id.* at 1312 (quoting *Innova/Pure Water, Inc. v. Safari*

13   *Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). Generally, the words of a claim

14   should be given their "ordinary and customary meaning," which is "the meaning that the term[s]

15   would have to a person of ordinary skill in the art in question at the time of the invention." *Id.* at

16   1312-13. In some instances, the ordinary meaning to a person of skill in the art is clear, and claim

17   construction may involve "little more than the application of the widely accepted meaning of

18   commonly understood words." *Id.* at 1314.

19   In many cases, however, the meaning of a term to a person skilled in the art will not be

20   readily apparent, and a court must look to other sources to determine the term's meaning. *See*

21   *Phillips*, 415 F.3d at 1314. Under these circumstances, a court should consider the context in

22   which the term is used in an asserted claim or in related claims, bearing in mind that "the person of

23   ordinary skill in the art is deemed to read the claim term not only in the context of the particular

24   claim in which the disputed term appears, but in the context of the entire patent, including the

25   specification." *Id.* at 1313. Indeed, the specification "'is always highly relevant'" and "'[u]sually

26   . . . dispositive; it is the single best guide to the meaning of a disputed term.'" *Id.* at 1315 (quoting

27   *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)). Where the

28   specification reveals that the patentee has given a special definition to a claim term that differs

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1   from the meaning it would ordinarily possess, "the inventor's lexicography governs." *Id.* at 1316.

2   Likewise, where the specification reveals an intentional disclaimer or disavowal of claim scope by

3   the inventor, the inventor's intention as revealed through the specification is dispositive. *Id.*

4   A court may also consider the patent's prosecution history, which consists of the complete

5   record of proceedings before the United States Patent and Trademark Office ("PTO") and includes

6   the cited prior art references. *Phillips*, 415 F.3d at 1317. The court may consider prosecution

7   history where it is in evidence, for the prosecution history "can often inform the meaning of the

8   claim language by demonstrating how the inventor understood the invention and whether the

9   inventor limited the invention in the course of prosecution, making the claim scope narrower than it

10   otherwise would be." *Id.*

11   Finally, a court also is authorized to consider extrinsic evidence in construing claims, such

12   as "expert and inventor testimony, dictionaries, and learned treatises." *Markman*, 52 F.3d at 980.

13   Expert testimony may be particularly useful in "[providing] background on the technology at issue,

14   . . . explain[ing] how an invention works, . . . ensur[ing] that the court's understanding of the

15   technical aspects of the patent is consistent with that of a person of skill in the art, or . . .

16   establish[ing] that a particular term in the patent or the prior art has a particular meaning in the

17   pertinent field." *Phillips*, 415 F.3d at 1318. Although a court may consider evidence extrinsic to

18   the patent and prosecution history, such evidence is considered "less significant than the intrinsic

19   record" and "less reliable than the patent and its prosecution history in determining how to read

20   claim terms." *Id.* at 1317, 1318 (internal quotation marks and citations omitted). Thus, while

21   extrinsic evidence may be useful in claim construction, ultimately "it is unlikely to result in a

22   reliable interpretation of patent claim scope unless considered in the context of the intrinsic

23   evidence." *Id.* at 1319. Any expert testimony "that is clearly at odds with the claim construction

24   mandated by the claims themselves, the written description, and the prosecution history" will be

25   significantly discounted. *Id.* at 1318 (internal quotation marks and citation omitted). Finally, while

26   the specification may describe a preferred embodiment, the claims are not necessarily limited only

27   to that embodiment. *Phillips*, 415 F.3d at 1323; *see also Prima Tek II, L.L.C. v. Polypap, S.A.R.L.*,

28   318 F.3d 1143, 1151 (Fed. Cir. 2003) ("The general rule, of course, is that claims of a patent are

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1   not limited to the preferred embodiment, unless by their own language.").

2   **III.   DISCUSSION**

3   **A.   "node"**

Terms in Dispute	GPNE's Proposed Construction	Defendants' Proposed Construction
"node"	"A device in a network that can transmit and receive information"	"A pager in a network operating independently of a telephone network"[4]

7   The term "node" appears throughout the three Patents. For example, the '267 Patent

claims:

9   1. A first **node** in a data network, the data network including a plurality of **nodes** including a
         first **node**, the first **node** comprising:

     at least one processor;

     a memory providing code to the least one processor; and

     an interface controlled by the least one processor to:

     transmit a random access request signal in a first slot, the random access request signal
         including information that allows determination that the first **node** requires an
         allocation of resources to transmit a reserve access request signal;

     receive a first grant signal subsequent to transmission of the random access request signal,
         said first grant signal including information relating to an allocation of a second slot to
         the first **node** for transmitting the reserve access request signal for transmitting first data
         packets containing a message;

     transmit the reserve access request signal in the second slot in response to the first grant
         signal;

     receive a second grant signal subsequent to transmission of the reserve access request
         signal, said second grant signal including information relating to an allocation of
         additional resources for transmitting the first data packets; and

     transmit the first data packets in response to the second grant signal, wherein the first data
         packets can be transmitted during transmission of a request signal by a second **node** into
         a third slot assigned to the second **node**.

23   *See id.* at 14:60-15:21 (emphasis added).

24   GPNE argues that "node" should be construed as "a device in a network that can transmit

25   and receive information." *See* Opening Br. at 3. Defendants argue that "node" should be

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[4] Defendants' original proposed construction did not include "in a network." Opening Br. at 3.
However, in Defendants' Responsive Brief, Defendants agreed that the node must be "in a
network" and that this language may be included in the construction. *See* Resp. Br. at 4 n.4.

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construed as "a pager in a network operating independently of a telephone network." *See* Resp. Br. at 4. Thus, the parties dispute whether the node must: (1) be a "pager" or whether it may be any "device," and (2) "operat[e] independently of a telephone network."

For the reasons set forth below, the Court construes "node" as meaning "pager with two-way data communications capability that transmits wireless data communications on a paging system that operates independently from a telephone network." The Court addresses in turn whether: (1) a "node" is simply a "device in a network" or whether the "node" is a "pager," and (2) the "node" must "operat[e] independently of a telephone network."

1. Intrinsic Evidence

a) Claim Language

At the outset, the Court observes that the claim language on its face does not use the term "pager." Rather, the claim language only describes a "node." *See, e.g.*, '267 Patent at 14:60-15:21. Thus, on its face, the claim language is more consistent with GPNE's proposed construction wherein "node" simply means "[a] device in a network that can transmit and receive information" and does not require a specific kind of device such as a "pager." However, claims must be read "light of the specification . . . ." *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257 (Fed. Cir. 1989). Accordingly, the Court proceeds to consider the specification.

b) Specification

When the term "node" is construed in light of the specification, it becomes clear that the "node" is a type of "pager" and not simply a device in a network.

Notably, beyond the claim language, the term "node" appears *only* in the Abstracts for each of the three Patents. *See e.g.*, '267 Patent, Abstract ("A network node in a communication system makes two reservation requests…."); '492 Patent, Abstract; '954 Patent, Abstract. The remainder of the specification explicitly describes the devices claimed in the Patents as a type of pager and makes clear that the invention was designed to address shortcomings in 1990s[5] pager systems.

For example, the "Technical Field" portion of the specification states that "*this invention pertains to communications paging, and particularly to two-way paging method and apparatus.*"

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[5] *See* '115 Patent (filed June 24, 1994).

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1   '267 Patent at 1:32-33 (emphasis added); *see also id.* at 14:14-15 ("[T]he invention provides a two-

2   way paging system . . . ."). Likewise, under the "Summary" heading, the specification describes

3   "[a] two-way paging system [that] utilizes four local frequencies for transmissions…." *Id.* at 1:66-

4   67. These statements strongly support the proposition that "node" claimed in the patents is a type

5   of "pager." *See Verizon Servs. Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1308 (Fed. Cir.

6   2007) ("When a patent thus describes the features of the 'present invention' as a whole, this

7   description limits the scope of the invention."); *SciMed Life Sys., Inc. v. Advanced Cardiovascular*

8   *Sys., Inc.*, 242 F.3d 1337, 1343 (Fed. Cir. 2001) ("[T]he characterization of the coaxial

9   configuration as part of the 'present invention' is strong evidence that the claims should not be read

10   to encompass the opposite structure.").

11   The "Related Art" section similarly supports the conclusion that the claimed invention is a

12   type of pager system. The "Related Art" section discloses that pager systems of the mid-1990's

13   were limited in that they could only engage in one-way communications, *i.e.*, they could receive

14   data but could not return data. *See* '267 Patent at 1:41-44. Prior art had attempted to address the

15   lack of two-way communication capabilities by "connect[ing] the pager to a telephone" or mobile

16   phone. *Id.* at 1:44-51. The specification acknowledges that some prior art pagers included an

17   ability to send an acknowledgement or response to a paging system. *Id.* at 1:52-62. However,

18   these systems required the use of "numerous frequencies or frequency sub-bands" which made

19   transitioning between areas "served by differing central stations . . . cumbersome." *Id*. It therefore

20   appears clear from the descriptions of the Related Art that the inventions disclosed in the Patents

21   are intended to address shortcomings in contemporary pager systems. This factor adds further

22   support to the conclusion that the "node" is a type of "pager." *See CVI/Beta Ventures, Inc. v. Tura*

23   *LP*, 112 F.3d 1146, 1160 (Fed. Cir. 1997) (noting that "[i]n construing claims, the problem the

24   inventor was attempting to solve, as discerned from the specification and the prosecution history, is

25   a relevant consideration"); *cf. Corning Glass Works*, 868 F.2d at 1257 (holding that the phrase

26   "[a]n optical waveguide" in the preamble of the claim language was meant to limit claim scope to

27   "optical waveguides" rather than all optical fibers because the "specification [made it] clear that the

28   inventors were working on the particular problem of an . . . optical communication system not on

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1   general improvements in conventional optical fibers").

2   Finally, the Court observes that the two exemplary embodiments described in the

3   specification repeatedly refer to "pager unit[s]." *See, e.g.*, '267 Patent at 4:31-32 ("Communication

4   between central control station **20** and pager unit **22** occurs on the four local frequencies . . . ."); *id.*

5   at 9:13-15 ("FIG **8** shows a paging unit **422** suitable for use with central control station 420.").

6   Similarly, the associated figures describe the device using terms such as "pager," and "pager

7   receiver." *See, e.g.*, *id.*, Figs. 2, 5, and 8. Indeed, the generic term "device" is used to describe the

8   claimed invention only once, and in the relevant sentence, the device is also described as a "pager."

9   *See id.* at 5:22-23 ("The transmitting device (either central station **20** or pager **22**) . . . .").

10   The Court acknowledges that, ordinarily, limitations set forth in a preferred embodiment

11   disclosed in a specification do not limit the scope of the claims. *See, e.g.*, *Liebel-Flarsheim Co. v.*

12   *Medrad, Inc.*, 358 F.3d 898, 908 (Fed. Cir. 2004). However, here, not only do the embodiments

13   consistently refer to the claimed communication devices as pager units, the remainder of the

14   specification similarly states that the claimed devices are pagers. Under these circumstances, the

15   description of the devices as a pager unit in the embodiments supports the conclusion that the

16   nodes are a type of pager. *See In re Abbott Diabetes Care Inc.*, 696 F.3d 1142, 1149 (Fed. Cir.

17   2012) (holding that the conclusion that the claimed electrochemical sensor could not have external

18   wires was supported by: (1) "every embodiment disclosed in the specification shows . . . [a] sensor

19   without external cables or wires," and (2) the discussion of the prior art in the specification

20   identified external cables or wires as a deficiency in the prior art supported). Thus, the

21   specification supports the conclusion that the claimed device is a type of pager.

22   The specification further supports the conclusion that the term "pager" refers to a type of

23   device that has qualities that distinguish it from other types of devices such as telephones. For

24   example, while not referring directly to pager units, the specification states that the claimed "two-

25   way paging system [would] operate[] independently from [the] telephone system." *See* '267 Patent

26   at 14:14-15. Similarly, the specification indicates that pager messages and telephone messages are

27   distinct. *See id.* at 5:31-35 ("Central computer **30** can distinguish between receipt of a telephone

28   message… and a pager message . . . by virtue of the fact that I/O interface **52** generates different

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1   types of interrupts to CPU **50** depending on the type of message received."). Likewise, in the

2   portion of the specification discussing the prior art, the terms "pager" and "telephone" are used to

3   refer to different devices. *See id.* at 1:44-46 (stating that "[p]rior art attempts to provide two-way

4   communication capabilities for a pager have included efforts to connect the pager to a telephone").

5   Thus, the specification supports the conclusion that the term "pager" does not simply refer to a

6   device in a network but rather to a device designed to operate in a particular kind of system.

7   Consequently, an accurate construction of "node" should disclose that the node is a type of pager

8   and not merely a device in a network.

9   GPNE argues that Defendants' construction, wherein "node" refers to a "pager," should

10   nevertheless be rejected because the specification makes it clear that "the devices contemplated in

11   the Patents are . . . not the *mere* 'pagers' of [the] time." Opening Br. at 4 (emphasis added). GPNE

12   argues that the discussion of the prior art in the specification confirms that the term "pagers" means

13   "historical one-way pagers." *See id.*; '267 Patent at 1:30-62 (noting that "[p]aging systems have

14   historically been one-way systems" and describing "[p]rior art attempts to provide two-way

15   communication capabilities for a pager . . . [by] connect[ing] the pager to a telephone"). GPNE

16   argues that the specification describes an "enhanced device[] that . . . the specification calls [a]

17   'pager unit[]'," and that, accordingly, it would be improper to describe the "node" as a "pager."

18   *See* Opening Br. at 4. GPNE's argument is not persuasive.

19   As an initial matter, GPNE cited no evidence in the specification indicating that the use of

20   the term "pager unit" was a deliberate attempt to distinguish the claimed devices from ordinary

21   "pagers." Indeed, Figure 2, which is referenced in the specification as providing "a schematic

22   view" of the "pager unit," *see* '267 Patent at 2:31, simply describes the device as a "pager." *See*

23   *id.*, Fig. 2. Moreover, even if "pager unit" was meant to distinguish the claimed invention from

24   traditional pagers, the use of the term "pager unit" acknowledges that the claimed invention is a

25   type of pager. Furthermore, while the Court agrees that the specification makes clear that the

26   claimed invention is distinguishable from prior art pagers in that the claimed devices are capable of

27   two-way communications, this does not support the conclusion that the claimed devices are not a

28   type of pager. Nor does the distinction between prior art pagers and the claimed pager units

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1   support the conclusion that the term "node" should be construed as referring to *any* "device in a

2   network that can transmit and receive information." *See* Opening Br. at 4. At best, the fact that the

3   claimed pager units are capable of two-way communications supports amending Defendants'

4   proposed construction to clarify that the "node" is a "pager" with *two-way communications*

5   *capability*. The Court will include this limitation in its construction.

6   In light of the description of the claimed invention as a "paging system," the clear

7   indications that the claimed invention was intended to address deficiencies in legacy pager systems,

8   and the repeated references to the claimed communications devices (the "nodes") as "pager units,"

9   the Court concludes that the specification supports construing the term "node" as referring to a

10   "pager with two-way communications capability."

<div align="center">c)   Prosecution History</div>

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12   Defendants' proposed construction is also supported by the prosecution history. During

13   prosecution, the inventor referred to the invention as a pager and contrasted it to a cellular phone.

14   Specifically, in describing the "[f]eatures" of the invention, the inventor stated: "Compact[-] The

15   size of a *pager* can be made smaller than [a] cellular phone due to its simplify[ied] design in both

16   the electronics and the size of the power supply needed." ECF No. 72-10 at GPNECorp. 00000323

17   (emphasis added) (disclosure dated Jan. 30, 2004). This statement adds further support to the

18   conclusion that the claimed "node" is a type of "pager."

<div align="center">2.   Extrinsic Evidence</div>

19

<div align="center">a)   Dr. Dinan's Testimony</div>

20   The conclusion that the invention is a type of pager device, albeit an enhanced one, is also

21   supported by the testimony of GPNE's expert, Dr. Esmael Dinan. Dr. Dinan described the claimed

22   invention as an "enhanced pager" and a "pager-type apparatus enhanced . . . ." *See* Green Decl.,

23   Ex. 5 ("Dinan Dep.") at 125:12, 125:25-126:2, 132:22-133:3. Dr. Dinan contrasted this device to

24   "legacy pagers." *Id.* at 125:20. According to Dr. Dinan, the difference between the device claimed

25   in the patent and legacy pagers is that the claimed device is "enhanced with preprogrammed

26   software and appropriate hardware to allow for two-way data packet communications through a

27   central control station." *Id.* at 125:9-15. (stating that "a POSA [would] understand[] that the

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<div align="center">13</div>

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1   specification discloses a new device that is not merely a pager as in 1993/1994, but a pager-type

2   apparatus enhanced with preprogrammed software and appropriate hardware to allow for two-way

3   data packet communications").

4   Significantly, Dr. Dinan stated that the term "pager" generally referred to something

5   different than a "telephone." *See id.* at 130:12-17 (agreeing that "in the 1993, 1994 time frame,

6   persons of ordinary skill did not refer to mobile telephones as pagers" or vice versa). Dr. Dinan

7   stated that "1993/1994 era pager[s]" differed from "mobile phone[s] from that same time" in that

8   the pagers "lack[ed] a microphone, a speaker, a processor for processing telephone signals and

9   transmitting those signals, and also potentially a keypad for dialing phone numbers." *Id.* at 127:18-

10   25. Dr. Dinan acknowledged that GPNE's enhanced pager device, as described in the

11   specification, similarly lacks the components necessary to qualify as a telephone. *See id.* at

12   129:14-130:11 (stating that "the patent specification's description of the pager devices" does not

13   disclose "circuitry . . . for processing or transmitting telephone signals" or the "programming to

14   support" the processing of telephone signals).

15   While Dr. Dinan stated that his definition of "enhanced pager" (a phrase which he

16   "coined") was broad enough to include a piece of prior art, "the Bhagat reference," with the ability

17   to communicate on both "pager networks and mobile phone[] networks," *id.* at 133:10-14, Dr.

18   Dinan agreed that, at least in the Bhagat device, separate and distinct electronic componentry was

19   used for communicating on the pager network as compared to the telephone network. *See id.* at

20   133:22-134:10. Dr. Dinan further acknowledged that the device claimed in the Patents did not

21   include the componentry necessary for "communicating with a telephone network." *Id.* at 134:11-

22   19.

23   Thus, the Court finds that Dr. Dinan's testimony supports the conclusion that the "node"

24   claimed in the Patents is a type of pager, albeit an enhanced one. Dr. Dinan's testimony also

25   supports the conclusion that the term "pager" connotes a type of device that has characteristics or

26   qualities that distinguish it from other devices such as telephones. Thus, Dr. Dinan's testimony

27   supports construing "node" as referring to a "pager," albeit one that has been "enhanced with

28   preprogrammed software and appropriate hardware to allow for two-way data packet

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communications," and not simply as referring to a device in a network. *Id.* at 125:9-15.

b)   Dictionary Definitions

GPNE argues that its construction of "node" as a "device in a network that can transmit and receive information" is supported by dictionary definitions of "node" and "pager." The Microsoft Computer Dictionary provides that, "[i]n networking," a "node" is "a device . . . that is connected to the network and is capable of communicating with other network devices." Declaration of Steven W. Hartsell in Support of GPNE's Opening Brief on Claim Construction ("Hartsell Decl."), Ex. D, ECF No. 69-5 (Microsoft Computer Dictionary (2002)). The McGraw-Hill Dictionary of Scientific Terms, defines "pager" as "[a] receiver in a radio paging system." *See* Hartsell Decl., Ex. J, ECF No. 69-11 (McGraw-Hill Dictionary of Scientific and Technical Terms (6th ed. 2002)). GPNE argues that because a "pager" only receives radio communications and GPNE's device both receives and transmits, GPNE's device is not a pager. The Court does not find GPNE's proffered dictionary definitions persuasive.

As set forth above, the specification, prosecution history, and GPNE's expert, Dr. Dinan's, testimony, confirm that the "node" is a type of pager and that accordingly, the term does not refer to any "device . . . that is connected to the network and is capable of communicating with other network devices." Hartsell Decl, Ex. D. Furthermore, while legacy pagers might only have been capable of "receiv[ing]" communications in "a radio paging system," *id.*, Ex. J, the Court is not persuaded that the addition of transmitting functionality robs the device of its fundamental nature as a pager. Rather, the additional functionality supports the conclusion that the node is a pager with "enhanced" functionality. *See* Dinan Dep. at 125:9-15 (describing device as an "enhanced" pager type apparatus).

3.   Conclusions Regarding the "Device" Versus "Pager" Dispute

As set forth above, while the claims do not define the "node" as a "pager," the specification, prosecution history, and the testimony of GPNE's expert, Dr. Dinan, all support the conclusion that the node is a type of pager with two-way data communications capability. Significantly, the term "pager" implies a particular type of device, which may have different qualities than other devices such as telephones. *See* '267 Patent at 14:14-15 (stating that the

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1   claimed "two-way paging system [would] operate[] independently from [the] telephone system");

2   Dinan Dep. at 127:16-25; 129:15-130:17. Accordingly, it is appropriate that the construction of

3   node disclose that it is a type of pager and not merely a device in a network. The Court therefore

4   construes "node" as meaning a "pager with two-way data communications capability."

5   **B.   "operat[e] independently of a telephone network"**

6   Having determined that the "node" is a type of "pager," the question remains whether the

7   Court should adopt Defendants' language stating that the pager "operat[es] independently of a

8   telephone network." *See* Opening Br. at 3. Defendants contend that this language correctly limits

9   the definition of "node" to devices which cannot operate on the telephone network. While GPNE

10   does not appear to dispute that the device must have the capability of operating independently of

11   the telephone network, GPNE does not agree that the device cannot also have the capability of

12   operating on a telephone network. *See id.* at 5. As will be set forth below, the Court finds that the

13   claim language, specification, and the testimony of Dr. Dinan support the conclusion that, while the

14   "node" must be capable of transmitting data on a "paging system" that is independent of the

15   telephone network, the "node" is not precluded from also having the capability of operating on the

16   telephone network.

17   **1.   Claim Language/Specification**

18   The claim language does not explicitly disclose any requirement that the "node" "operat[e]

19   independently of a telephone network." Defendants argue that the Court should nevertheless

20   include such a limitation based on language appearing in the specification. *See* Resp. Br. at 4-5.

21   Specifically, Defendants cite the portion of the specification providing that "the invention provides

22   a two-way paging system which operates independently from a telephone system for wireless data

23   communication between users." '267 Patent at 14:14-16. Defendants appear to contend that this

24   statement supports the conclusion that the node may only communicate on a pager network and

25   therefore cannot be a device capable of communicating on the telephone network. *See* Resp. Br. at

26   5 ("And consistent with pagers of its time, the pager of the Patents-in-Suit communicates on a

27   paging network, not a telephone network.") (citing '267 Patent at 14:14-16). In contrast, GPNE

28   contends that this statement supports only the proposition that the "two-way paging"

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1   communications must occur independently of the telephone network, and does not support the

2   conclusion that the node itself cannot also be connected to and thus capable of communicating on

3   the telephone network. Opening Br. at 5. The Court agrees with GPNE.

4   As an initial matter, the cited statement from the specification refers to the "two-way

5   paging *system*" and not specifically to the "pager unit." '267 Patent at 14:14-16 (emphasis added).

6   It is not clear whether "paging system" refers to the overall communications system or whether

7   "paging system" refers to individual "pager units." A paging *system* may exist and operate

8   independently of the telephone network without requiring that individual paging *units* operate

9   entirely exclusively from the telephone network. A pager unit could, for example, transmit certain

10   data communications on a paging *system* that "operates independently from [the] telephone

11   system," while engaging in other types of communications on the telephone system. '267 Patent at

12   14:14-16.[6] Accordingly, the Court cannot infer from the above statement in the specification that

13   the inventor intended to limit the claimed "node" to devices that communicate exclusively on the

14   pager system. Thus, the specification does not support Defendants' construction.

15   **2.   Prosecution History**

16   The statements of the inventors, Gabriel Wong and Po Sing Tsui, to the Patent Office also

17   undermine Defendants' proposed construction. In one disclosure, they state:

18   The paging system used in the paging industry of today is a passive device in which
          a pager could only be paged and cannot return a page call without accessing the
19   telephone system.

20   This disclosure depicts the design of a two-way paging system which operates
          independently from the telephone system for a wireless data communication
21   between the users.

22   *See* Hartsell Decl., Ex. F, ECF No. 69-7 at GPNECorp. 00000314.

23   When viewed in this context, it appears that the phrase "which operates independently from

24   the telephone system" is meant only to indicate that the system can return a "data communication"

25   _____

26   [6] Indeed, the Court notes that, while it is clear from the "operating independently" statement that
     the paging system must transmit data independently of the telephone system, other parts of the
     specification suggest that the paging system may still have the capability to interact with the
27   telephone system. *See* '267 Patent, Figs. 1 and 7 (describing central control office which may
     receive information from "computerized telephone answering system"); *id.* at 3:1-3 (stating that
28   "central control station **20** includes central computer **30**; transmitter **32**; receiver **34**; and
     computerized telephone answering system").

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1   or a "page call" without "accessing the telephone system," and does not necessarily mean that the

2   system and/or individual pager units cannot have any interaction with the telephone system. *Id.*;

3   *see also id.* at GPNECorp. 00000323 (stating that one feature of the system is its ability to "operate

4   independently from the existing telephone system to return a page call").

5   **3.   Dr. Dinan Testimony**

6   Defendants argue that their proposed construction is supported by Dr. Dinan's testimony.

7   The Court disagrees. Dr. Dinan's testimony establishes that pager networks and telephone

8   networks are distinct and that the electronic componentry and programming that permits a device

9   to communicate on each is generally different. *See* Dinan Dep. at 133:10-134:10. However, Dr.

10   Dinan stated that an "enhanced pager," as he defined the term, would include devices with the

11   componentry to communicate on both networks. *See id.* at 133:10-14. Accordingly, Dr. Dinan's

12   testimony does not support the proposition that the claimed devices *must* operate exclusively on

13   pager networks and cannot also include the capability to operate on telephone networks.

14   **4.   Conclusions Regarding the Operate Independently of a Telephone
                                Network Limitation**

15   For the reasons set forth above, the Court rejects Defendants' proposed construction to the

16   extent Defendants seek to limit the "node" to devices which do not have the capability of operating

17   on a telephone network. However, because the specification clearly discloses that the "paging

18   system . . . operates independently from a telephone system for wireless data communication

19   between users," '267 Patent at 14:14-16, and thus implies that the "node" must have the capability

20   to communicate on a paging system that is independent of the telephone system, the Court includes

21   the following language in the construction of "node": "that transmits wireless data communications

22   on a paging system that operates independently from a telephone network." The Court advises the

23   parties that this construction should not be read as implying that the node cannot also send "data

24   communications" on a telephone system if the telephone system permits such communications.

25   **5.   The Final Construction of "Node"**

26   For the reasons set forth above, the Court construes "node" as "pager with two-way data

27   communications capability that transmits wireless data communications on a paging system that

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1   operates independently from a telephone network."[7]

2   ### C.   "frequency"

3   While the parties initially disputed the construction of this term, at the June 6, 2013

4   *Markman* hearing, the parties agreed to the following construction for frequency, which the Court

5   adopts: "a number expressed in hertz."

6   ### D.   "randomly generated information"

7
Terms in Dispute	GPNE's Proposed Construction	Defendants' Proposed Construction
"randomly generated information"	No construction necessary, or "Information that is randomly generated"	"Identification of the randomly selected time slot"

10

11   The term "randomly generated information" appears in all three Patents. For example, the

12   '267 Patent discloses:

13   **13.** The first node of claim **12**,

14   wherein the random access request signal transmitted from the first node includes
   randomly generated information created by the first node,

16   wherein the first grant returns said **randomly generated information** to the first node to
   enable identification of the first node as a desired recipient of the first grant.

17   *Id.* at 16:1-7 (emphasis added); *see also* '492 Patent at 21:8-38 (claiming a node "wherein the first

18   grant signal returns randomly generated information to the first node to enable identification of the

19   first node as a desired recipient of the first grant signal"); '954 Patent at 17:37-40 ("The first node

20   of claim **18**, wherein the interface is further controlled by the processor to: transmit randomly

21   generated information created by the first node . . . ."). Defendants request construction of this

22   term to clarify the meanings of Claims 13, 31, and 39 of the '267 Patent, Claim 37 of the '492

23   Patent, and Claims 19 and 22 of the '954 Patent. *See* Resp. Br. at 26.[8]

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25   ---
[7] In the remainder of this Order, the Court for simplicity may uses the term "device" or "node" to
26   refer to the node. This use is not meant to indicate that the node may be any device and need not
   be a type of pager.
27   [8] Plaintiffs do not specify whether the constructions they request in their Claim Construction brief
   apply to all the Patents or all the claims. Defendants include in parentheses in the headings of
   several of their requested constructions the identity of certain claims. *See, e.g.*, Resp. Br. at 26 ("I.
28   'randomly generated information' ('492 Pat. claim 37, '267 Pat. claims 13, 31, 39, and '954 Pat.

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The parties dispute whether the term "randomly generated information," a term which appears in all three Patents, refers generically to "[i]nformation that is randomly generated," as proposed by GPNE, or whether the term refers more specifically to the "[i]dentification of the randomly selected time slot," as proposed by Defendants. GPNE argues that no construction is needed and that if a construction is required, the term should be construed as "information which is randomly generated." Opening Br. at 11-12. Each party cites the claim language and specification in support of its proposed interpretation. The Court agrees with GPNE that "randomly generated information" means "[i]nformation that is randomly generated."

1.   Claim Language

As an initial matter, the Court finds that the claim language supports GPNE's proposed construction. The claim language indicates that the "node" generates certain random information which is "transmitted" and then returned to the node by the control station as part of the "first grant," so that the node is able to identify that it, and not some other node, is the "desired recipient of the first grant signal. *See, e.g.*, '267 Patent at 16:1-7. The claim language does not state that the "randomly generated information" must be the identity "of the randomly selected time slot." Thus, the claim language supports GPNE's construction, wherein the term simply refers to "[i]nformation that is randomly generated."

2.   Specification

The specification also fails to persuade the Court that Defendants' more narrow interpretation -- wherein "randomly generated information" refers to "[i]dentification of the randomly selected time slot" -- should be adopted. The terms "random" or "randomly" appear almost exclusively in the portion of the specification describing the "Operation of [the] Second Embodiment." '267 Patent at 11:4.[9] In the second embodiment, when a "pager unit" enters a new

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claims 19, 22)"). Notably, neither party has clearly argued that the constructions for this term or any other term should be different for different Patents or claims.
[9] The term "random" also appears in the Abstract of the '267 Patent. Specifically, the Abstract refers to the "random access request signal." *See e.g.* '267 Patent, Abstract ("When a first node has data to transmit, the first node transmits a random access request signal."). The claim language distinguishes the "random access request signal" and the "randomly generated information." *See e.g. id.* at 16:2-4 ("The first node of claim 12, wherein the random access request signal transmitted from the first node includes randomly generated information created by the first node . . . .") .

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1   region controlled by a different central control station, the pager unit must "execute[] a channel

2   switching routine." *Id.* at 11:19-21. As part of this routine, when the pager unit discovers that it

3   has entered a new area, "the request on frequency C_4 is randomly made." *Id.* at 11:47-49. By

4   "randomly made," the specification appears to mean that the request is made in a "time slot which

5   [the] pager unit . . . randomly generate[s]." *Id.* at 11:58-59; *see also id.* at 11:46-51. After the

6   pager unit makes its request in the randomly generated time slot, the pager unit monitors

7   communications from the control station until it detects a message from the station "that includes . .

8   . information stored in the same [randomly generated] time slot [in] which" the pager unit

9   transmitted its request. *Id.* at 11:52-59.

10   Thus, in the second embodiment, the "randomly generated information" is the time slot

11   upon which a pager transmits its first request to a new control station. Defendants argue that the

12   specification's use of the term random therefore supports Defendants' construction wherein the

13   "randomly generated information" refers to the "identification of the randomly selected time slot."

14   Resp. Br. at 26. Defendants also note a statement in the portion of the specification setting forth

15   the second embodiment describing the random time slot as "the only way [the] central control

16   station . . . can identify the in-wandering pager unit." *Id.* at 15; *see also* '267 Patent at 13:1-3 ("At

17   this point, such time slot is the only way central control station **420** can identify the in-wandering

18   pager unit **422**.").

19   While the Court agrees that the description of the second embodiment supports Defendant's

20   construction, this does not provide a sufficient basis to adopt Defendants' proposed construction. It

21   is well established that "particular embodiments appearing in the written description will not be

22   used to limit claim language that has broader effect." *Innova/Pure Water, Inc. v. Safari Water*

23   *Filtration Sys., Inc.*, 381 F.3d 1111, 1117 (Fed. Cir. 2004) (citing *Electro Sci. Indus., Inc. v.*

24   *Dynamic Details, Inc.*, 307 F.3d 1343, 1349 (Fed. Cir. 2002); *Laitram Corp. v. NEC Corp.*, 163

25   F.3d 1342, 1347-48 (Fed. Cir. 1998)). Thus, "even where a patent describes only a single

26   embodiment, claims will not be 'read restrictively unless the patentee has demonstrated a clear

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28   Accordingly, the references to the "random access request signal" in the Abstract are not helpful in
       determining the meaning of the term "randomly generated information."

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1   intention to limit the claim scope using 'words or expressions of manifest exclusion or

2   restriction.'" *Id.* (quoting *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir.

3   2004) (citation omitted)).

4   Here, the claim language broadly refers to "randomly generated information." '267 Patent

5   at 16:3. While the randomly generated information in the second embodiment is the identification

6   of the randomly generated time slot, the specification does not express a "clear intention to limit

7   the" broad language used in the claims -- "randomly generated information" -- to the identification

8   of the randomly generated time slot. *Innova/Pure Water, Inc.*, 381 F.3d at 1117.

9   In Defendants' Claim Construction Brief, Defendants rely heavily upon a statement in the

10   portion of the specification discussing the second embodiment wherein the time slot is described as

11   the "only way [the] central control station . . . can identify the in-wandering pager unit." '267

12   Patent at 13:1-3; Resp. Br. at 15. Again, this statement appears in the context of describing a

13   preferred embodiment and the only clear inference that can be drawn from this statement is that, in

14   the second embodiment, the random time slot is the means by which the central control station

15   identifies the incoming pager. The Court cannot discern from the cited language a clear intent to

16   limit the randomly generated information in all embodiments to the randomly generated time slot.

17   Accordingly, Defendants' reliance on the "only way" statement is misplaced. *See Innova/Pure*

18   *Water, Inc.*, 381 F.3d at 1117 (providing that limitations will not be inferred from embodiments

19   "unless the patentee . . . demonstrate[s] a clear intention to limit the claim scope").

20   The Court therefore concludes that the specification does not support Defendants'

21   construction wherein the "randomly generated information" refers to the "[i]dentification of the

22   randomly selected time slot." Resp. Br. at 26.

23   **3.   Defendants' Remaining Arguments**

24   Defendants raise three additional arguments in support of their construction. For the

25   reasons set forth below, each of these arguments fails.

26   First, Defendants argue that GPNE's construction, wherein the "randomly generated

27   information" may be any randomly generated information, should not be adopted because "it

28   would encompass matter beyond what the specification conveys is the alleged invention." Resp.

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1   Br. at 27. Defendants rely upon *Retractable Technologies, Inc. v. Becton, Dickinson & Co.*,

2   wherein the Federal Circuit held that, notwithstanding the fact that "the claims [left] open the

3   possibility that the recited 'body' [might] encompass a syringe body composed of more than one

4   piece," the specifications for the patents warranted limiting the claim scope to "one-piece

5   bod[ies]." *Id.*, 653 F.3d 1296, 1305 (Fed. Cir. 2011). *Retractable* is distinguishable. In that case,

6   not only were the embodiments "expressly limited to having a body that is a single piece," unlike

7   in the present case, the specifications "expressly recite[d] that 'the *invention*'" included this

8   limitation. *Id.* (emphasis added); *see also SciMed Life Sys.*, 242 F.3d at 1343 ("[T]he

9   characterization of the coaxial configuration as part of the 'present invention' is strong evidence

10 that the claims should not be read to encompass the opposite structure."). Accordingly,

11 Defendants' reliance on *Retractable* is misplaced.[10]

12   Second, Defendants argue, in conclusory fashion, that construing the term "randomly

13 generated information" to include any randomly generated information would render the claims

14 "invalid . . . for lack of written description." Resp. Br. at 27. The Court is not persuaded. 35

15 U.S.C. § 112(a) provides that a patent must include, separate from and in addition to the claims, "a

16 written description of the invention." "The test for sufficiency of the written description… [is]

17 'whether the disclosure of the application relied upon reasonably conveys to those skilled in the art

18 that the inventor had possession of the claimed subject matter as of the filing date.'" *In re Owens*,

19 710 F.3d 1362, 1366 (Fed. Cir. 2013) (internal citation omitted). Whether a written description is

20 sufficient is a "question of fact," *id.*, and is therefore "generally not a proper part of claim

21 construction," *GeoTag, Inc. v. Frontier Commcns Corp.*, No. 2:10-CV-265-JRG, 2013 WL

22 693852, at *24 (E.D. Tex. Feb. 26, 2013) (citations omitted).

23   Here, it is possible that the Patents will, at a later stage, be deemed invalid for lack of a

24 sufficient written description to the extent the specification fails to describe randomly generated

25 ───────────────

[10] Defendants also contend that GPNE's construction of "randomly generated information" --
26 "information that is randomly generated" -- must be rejected because it is "circular" and
"unhelpful." Resp. Br. at 27 (citing *Power-One, Inc. v. Artesyn Technologies, Inc.*, 599 F.3d 1343,
27 1348 (Fed. Cir. 2010)). The Court is not persuaded. The claim term -- "randomly generated
information" -- is relatively simple to understand. GPNE's construction will adequately "ensure
28 that the jury fully understands . . . what the patentee covered by the claims." *Power-One, Inc.*, 599
F.3d at 1348 (citation omitted).

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1   information other than the random time slot. *See In re Owens*, 710 F.3d at 1366 (holding that

2   written description must show that "the inventor had possession of the claimed" invention).

3   Nevertheless, as set forth above, under the ordinary rules of claim construction, it would not be

4   proper for the Court to limit the term "randomly generated information" based solely on the

5   preferred embodiment in the specification. Where the ordinary rules of claim construction support

6   a broad construction of a term, the Court may not adopt a narrower interpretation to prevent the

7   claims from being deemed invalid for lack of an adequate written description. *See Liebel-*

8   *Flarsheim Co.*, 358 F.3d at 913, 914 (construing "physical indicia" broadly because the claim

9   language did not limit the term to indicia related to the length of the extender and it would be

10   improper to limit the scope of the invention based on the embodiment, and rejecting defendant's

11   argument that the claim term should be interpreted narrowly to avoid having claim declared

12   "invalid for lack of a written description or enablement"); *id.* at 911 ("[T]he court has 'admonished

13   against judicial rewriting of claims to preserve validity'." (internal citation omitted)).

14   Finally, Defendants argue that if the Court adopts GPNE's proposed construction, the

15   Patents will fail for lack of enablement. Resp. Br. at 27. The enablement requirement "requires

16   that the specification teach those in the art to make and use the invention without 'undue

17   experimentation.'" *In re Vaeck*, 947 F.2d 488, 495 (Fed. Cir. 1991) (internal citation omitted).

18   "That *some* experimentation may be required is not fatal; the issue is whether the amount of

19   experimentation required is 'undue.'" *Id.* (internal citation omitted). Here, Defendants have cited

20   no evidence supporting the proposition that it would require "undue experimentation" for a POSA

21   to create a node wherein the randomly generated information sent and received by the first node is

22   something other than the randomly generated time slot. *Id.* Accordingly, Defendants' enablement

23   argument fails.

24   Thus, for the reasons set forth above, the Court construes "randomly generated information"

25   as "information that is randomly generated."

26   **E.   "count value"**

27

GPNE Proposed Construction	Defendants' Proposed Construction
"A numeric representation of the amount of	"The number of consecutively related packets

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remaining data to be transmitted"	emanating from a transmitter"

The terms "count value" appear in all three Patents. For example, the '267 Patent states:

> 12. The first node of claim 11, wherein the total number of related packets being transmitted comprises a **count value** to enable a receiving node in the plurality of nodes to determine when the first data packets being transmitted together are completely received.

Id. at 15:63-67 (emphasis added). Defendants request this construction in connection with Claims 12 and 30 of the '267 Patent, Claim 37 of the '492 Patent, and Claim 18 of the '954 Patent.

Both parties agree that a count value is a number used to determine when the last data packet in a transmission has been received. *See* Opening Br. at 13; Resp. Br. at 25. The parties dispute, however, the precise nature of the count value. *Id.* GPNE contends that the specification discloses a means of using a dynamic countdown metric in which each data packet carries a unique count value, *i.e.* that the count value is an incrementally changing number such as 1 of 10, 2 of 10, etc. *See* Opening Br. at 13-14. Defendants, however, argue that this system is not supported by any language in the specification and that the count value is a static number which reflects the "number of consecutively related packets emanating from a transmitter." *See* Resp. Br. at 25-26. For example, under Defendants' proposed construction, each packet in a message consisting of 10 packets would disclose that the count value is 10. *Id.* As discussed below, the Court agrees with Defendants that GPNE's proposed construction is not supported by the claim language or specification. Therefore, the Court construes "count value" as "the number of consecutively related packets emanating from a transmitter."

1.   Claim Language/Specification

At the outset, the Court finds that the claim language is most consistent with Defendants' proposed construction wherein count value refers to the total number of related packets. Significantly, several claims in the '267 Patent and one claim in the '954 Patent define the "count value" as the "total number of related packets being transmitted . . . to enable a receiving node in the plurality of nodes to determine when the first data packets being transmitted together are completely received." '267 Patent at 18:14-19 (Claim 30); *see also* '954 Patent at 17:32-36; Transcript of June 6, 2013 Claim Construction Hearing ("Tr.") at 139:6-8. *See generally Phillips*, 415 F.3d at 1313 (noting that the words of the claim themselves are the objective starting point for

25

1   claim interpretation).[11]

2   Turning to the specification, both sides cite the following statement in the specification as

3   supporting their respective constructions: "the packets may be formatted in a manner to indicate the

4   number of consecutively related packets emanating from a transmitter (e.g., there may be a separate

5   packet field indicating the continuation number of related packets)." *See* '267 Patent at 5:26-30;

6   Opening Br. at 14; Resp. Br. at 25. While this statement is somewhat ambiguous, the reference to

7   "number of consecutively related packets" suggests that the count value is, as Defendants contend,

8   a static value representing the total number of packets in a message.[12]

9   GPNE argues that part of the aforementioned statement supports the conclusion that the

10   count value is a changing number representing the amount of remaining data because the statement

11   refers to a "continuation number" and there is language in the specification describing "the separate

12   packets making up a message . . . as 'continuations'." Opening Br. at 14; *see also* '267 Patent at

13   7:55-56 ("[S]ubsequent communication packets providing continuations of the message content.").

14   The Court is not persuaded. Even if "continuations" are "separate packets," Opening Br. at 14, it

15   does not necessarily follow that the "continuation number of related packets," '267 Patent at 5:29-

16   30, must be a dynamic, changing number representing the amount of remaining data to be

17   transmitted. The "continuation number of related packets" may still refer to a single number

18   representing the total number of "separate packets" in a transmission.

19   Finally, at the June 6, 2013 *Markman* hearing, GPNE claimed for the first time that its

20   construction is supported by Figure 5. Tr. at 136:17-139:5. Figure 5 consists of a flow chart

21   describing how the pager processes incoming data packets and commands from the control station.

22   One step in the process of receiving packets is labeled "end of message" and directs the pager to

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[11] The claim language in the '492 Patent does not define count value, besides stating that it is used
by the node in determining when all packets have been received. *See* '492 Patent at 17:35-38
(stating that the "count value . . . enables the processor of the controller to determine when the data
packets being transmitted are completely received"). As will be discussed *infra* in addressing
GPNE's arguments regarding Figure 5 of the specification, the Court is not persuaded that the
count value must be a dynamic, changing number simply because it is used in determining when all
packets have been received.
[12] Notably, GPNE does not appear to dispute the fact that the first portion of the quoted statement
refers to a static value representing the total number of packets. *See* Opening Br. at 13
("Defendants' construction appears to address the total number of packets - a static number ('the
number of consecutively related packets emanating from a transmitter').").

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1   proceed along different paths based on whether the answer to this inquiry is "yes" or "no." *See*

2   '267 Patent, Fig. 5; *id.* at 7:56-57 ("[M]icroprocessor **80** checks at step **316** to ensure that the entire

3   message has been received."). Figure 5 does not indicate how the pager determines whether the

4   packet is the "end of message," but GPNE argues that the pager could only make this

5   determination if the count value is, as GPNE contends, a dynamic, changing number representing

6   the amount of remaining data which reaches zero on the last packet. *See* Tr. at 138:14-24. The

7   Court disagrees. Even if the count value is a static number representing the total number of

8   packets, the pager could still determine that the last packet is the end of the message. For example,

9   if a message has a count value of 10, and the pager is aware that it has previously received 9

10   packets, then the pager could determine that the tenth packet is the last packet. Accordingly,

11   Figure 5 does not provide a basis to conclude that the count value is, as GPNE contends, a

12   dynamic, changing number representing the amount of data remaining in a message.

13   Thus, for the reasons set forth above, the Court finds that Defendants' description of "count

14   value" as "[t]he number of consecutively related packets emanating from a transmitter" is the most

15   consistent with the specification.

16   2.   **Extrinsic Evidence**

17   GPNE also argues that its proposed construction is supported by the testimony of Dr.

18   Dinan. *See* Opening Br. at 14; Resp. Br. at 25. Dr. Dinan's testimony does not persuade the Court

19   that GPNE's construction should be adopted.

20   Dr. Dinan opined that the count value represented a dynamic number, which is assigned to

21   each packet and indicates the packet's place in the sequence of packets constituting a message. *See*

22   Hartsell Decl., Ex. E ("Dinan Decl."), ¶¶ 65, 70-71; Dinan Dep. at 170:16-171:4. Dr. Dinan relies

23   in part on the portions of the specification discussed above, particularly the references to the

24   "continuation number." *See* Dinan Decl. ¶¶ 61-64. The Court disagrees with Dr. Dinan's opinion

25   that the specification supports Plaintiff's construction for the reasons set forth above.

26   Dr. Dinan also relies on certain statements in the prosecution history. Specifically, Dr.

27   Dinan relies on an exchange between GPNE and the examiner relating to Claim 69 of the '492

28   Patent. *See* Dinan Decl. ¶ 67. As drafted in November 2009, Claim 69 provided "wherein the

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1   interface further transmits information relating to a **count value**, and wherein the interface further

2   transmits terminal indication information indicating that the final data packet is the last data

3   packet." *See* Dinan Decl. ¶ 66.[13] In a November 2009 office action, the examiner rejected this

4   claim. The examiner acknowledged that the prior art, Patent No. US005677909A ("Heide"), did

5   not specifically disclose the use of a "count value" and disclosed only the use of a "'more' bit" to

6   indicate the last packet in a data transmission. *See* Dinan Decl. ¶ 67 (quoting November 27, 2009

7   office action). However, the examiner stated, "[i]t would have been obvious to one of ordinary

8   skill in the art," that Heidi "was made to have **a counting down system in order to be aware [of]**

9   **the total number [of] packets that need to be received.**" *Id.* (quoting November 27, 2009 office

10   action). In March 2010, GPNE responded that its device did not feature the "'more' bit"

11   termination character. *See id.* ¶ 68 (quoting March 2010 response). GPNE did not correct the

12   examiner's description of the "count value" as "a counting down system." Dr. Dinan argues that

13   GPNE's failure to correct the examiner's statement indicates that the inventors believe the count

14   value was a counting down system. *See id.* ¶ 69.

15   The Court is not persuaded that GPNE's failure to correct the examiner's statements

16   necessarily means that the "count value" was, and always has been, intended to refer to a counting

17   down system. Given that the specification describes the "count value" as a static number and does

18   not describe a counting down system, the Court declines to conclude that count value refers to a

19   dynamic number based on this ambiguous exchange in the prosecution history.

20   Accordingly, for the reasons set forth above, Dr. Dinan's testimony does not persuade the

21   Court that GPNE's construction of "count value" should be adopted. Thus, in light of the

22   statements in the specification, the Court adopts Defendants' construction wherein "count value" is

23   "[t]he number of consecutively related packets emanating from a transmitter."

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26   [13] GPNE did not provide this portion of the prosecution history (or at least did not identify it in
     their filings). Defendants provided the Court with a DVD containing copies of the entire
27   prosecution history for each of the three Patents. Because Defendants did not file the DVD, the
     Court cites Dr. Dinan's declaration for the relevant quotations. The Court has checked Dr. Dinan's
28   declaration against the prosecution history contained on Defendants' DVD to ensure the accuracy
     of Dr. Dinan's quotations.

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F.   "interface [configured/controlled] by the at least one processor to [transmit and receive terms]"

Terms in Dispute	GPNE's Proposed Construction	Defendants' Proposed Construction
"interface [configured / controlled] by the at least one processor to [transmit and receive terms]"	"Electronic circuitry capable of being configured / controlled by the processor(s) according to instructions in the memory, that allows the processor(s) to communicate with a transceiver"	"Electrical connections (e.g., wires or interconnect) that allow signals to pass between the processor and a transceiver (i.e., transmitter / receiver components). The functional language purportedly describing how the interface is controlled or configured imparts no structure to the interface and, therefore, is entitled to no patentable weight in distinguishing the prior art. Alternatively, if accorded patentable weight, this functional language renders the claims indefinite as hybrid apparatus / method claims."

The term "interface [configured/controlled] by the at least one processor to [transmit and

receive terms]" ("Interface") appears in a number of claims in the three Patents.[14] For example, the

'267 Patent discloses:

> 1. A first node in a data network, the data network including a plurality of nodes including a first node, the first node comprising:
>
> at least one processor;
>
> a memory providing code to the least one processor; and
>
> an **interface controlled by the least one processor to:**
>
> **transmit** a random access request signal . . .;
>
> **receive** a first grant signal . . .;
>
> **transmit** the reserve access request signal in the second slot in response to the first grant signal;
>
> **receive** a second grant signal . . .; and
>
> **transmit** the first data packets in response to the second grant signal . . .

See id. at 14:60-15:21 (emphasis added).

The parties generally agree that the Interface is electrical connections or circuitry enabling

signals to pass between the processor and the transceiver. However, the parties dispute whether the

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[14] The claims of the '267 and '954 Patents recite that the Interface is "controlled by" the processor. The claims of the '492 Patent recite that the Interface is "configured by" the processor.

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construction of Interface should state that the electronic circuitry/connections are "capable of being configured/controlled by the processor(s) according to instructions in the memory." Opening Br. at 15. Defendants also argue that the construction of Interface should disclose that the term is either not entitled to "patentable weight" or, alternatively, is indefinite. Resp. Br. at 18. The Court does not agree that the construction of the term (which would theoretically be provided to the jury) should state that the term lacks patentable weight and/or is indefinite. Nevertheless, the Court will consider Defendants' arguments regarding patentable weight and indefiniteness after considering the parties' arguments regarding GPNE's proposal to include the "according to instructions in the memory" language in the construction of Interface.

1. "instructions in the memory"

As set forth above, GPNE argues that the Interface must be "capable of being configured/controlled by the processor(s) according to instructions in the memory." *See* Opening Br. at 14. In Defendants' claim construction brief, Defendants appeared to contest the inclusion of this language. However, at the June 6, 2013 *Markman* hearing, Defendants agreed that the Interface must be "capable of being configured/controlled by the processor(s) according to instructions in the memory" and indicated that Defendants did not object to the inclusion of this language in the construction of Interface. Tr. at 121:3-17**.** Accordingly, the Court finds that the construction for interface should include the phrase: "which is configured/controlled by the processor(s) according to instructions in the memory."[15]

2. Patentable Weight

Having adopted GPNE's configuration/control language, the Court proceeds to consider the issue of patentable weight. Defendants argue that the language requiring that the Interface be able to be "configured/controlled . . . to[] transmit . . . [and] receive" information is functional in that it attempts to define the structure of the invention by its function. *See* '267 Patent at 14:60-15:21. Defendants argue that this "functional language" does not, however, actually "impart[] [any

---

[15] The Court recognizes that GPNE's proposed construction used the language "Electronic circuitry *capable* of being configured/controlled by the processor(s) according to instructions in the memory." As will be discussed *infra* in Section III.G.3, the inclusion of the term "capable" introduces ambiguity as to whether the device must be actually configured or programmed to perform the relevant functions.

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1   unique] structure to the interface" and, therefore, is entitled to no patentable weight in

2   distinguishing the prior art. Resp. Br. at 18. As will be set forth below, the Court finds that the

3   issue of patentable weight is not appropriately resolved at this juncture.

4   The concept of patentable weight is explained in *In re Schreiber*, 128 F.3d 1473 (Fed. Cir.

5   1997). In that case, the Federal Circuit considered whether a prior art reference disclosing a

6   conical shape "useful for purposes such as dispensing oil from an oil can" anticipated the plaintiff's

7   claim for a conical device useful for dispensing popcorn. *Id.* at 1474-77. The plaintiff argued that

8   his conical structure was not anticipated because the prior art reference did not disclose that the oil

9   dispensing device claimed was also useful for dispensing popcorn. *Id.* at 1477. The *Schreiber*

10   Court disagreed, reasoning "the recitation of a new intended use for an old product does not make a

11   claim to that old product patentable." *Id.* Accordingly, the *Schreiber* Court held that the plaintiff's

12   "contention that his structure [would] be used to dispense popcorn [did] not have patentable weight

13   [because] the structure [was] already known, regardless of whether it has ever been used in any

14   way in connection with popcorn." *Id.* Thus, *Schreiber* supports the proposition that language

15   defining a structure by its function is not entitled to patentable weight if it does not require that the

16   structure have qualities and capabilities that distinguish it from the prior art.

17   In this case, the Court rejects Defendants' patentable weight argument because it does not

18   appear to be an issue of claim construction, and thus, is not properly decided at this stage.

19   Significantly, the holding in *Schreiber* was issued in the context of deciding an appeal of the

20   United States Patent and Trademark Office's rejection of the *Schreiber* plaintiff's patent claims on

21   the grounds that the claimed invention was anticipated by the prior art. As noted by the district

22   court in *Freeman v. Gerber Products Co.*, the patentable weight issues raised in *Schreiber* related

23   to "[p]atentability . . . rather [than] the issue . . . [of] claim construction." *Id.*, 357 F. Supp. 2d

24   1290, 1297 n.2 (D. Kan. 2005). Accordingly, the Court is not persuaded that this issue is properly

25   raised at this stage and rejects Defendants' argument on this ground. *Id.* (finding "*In re Schreiber*

26   to be inapposite, at least at this procedural juncture [claim construction]"). *But see Collegenet, Inc.*

27   *v. ApplyYourself, Inc.*, No. CV-02-484-HU, 2002 WL 34471701, at *18 (D. Or. Dec. 19, 2002)

28   ("[a]ssuming" without deciding "that the determination of the patentable weight" of claim term

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1   was "proper at the claim construction stage" and rejecting "defendant's argument" (citation

2   omitted)).

3.   Indefiniteness

Defendants also argue that, if the Court does not determine that the functional language is

not entitled to patentable weight, the Court should find that the claims featuring this language are

indefinite. Resp. Br. at 18. While Defendants argument regarding indefiniteness is limited, *see id.*

at 21 n.15 (discussing indefiniteness), the Court surmises that Defendants are contending that the

"functional language renders the claims indefinite as hybrid apparatus / method claims." *Id.*

Defendants appear to rely upon *IPXL Holdings, L.L.C. v. Amazon.com, Inc.*, 430 F.3d 1377 (Fed.

Cir. 2005). *See id.* at 21 n.15. This case is distinguishable.

In *IPXL*, the Federal Circuit held that a claim directed towards a system for executing

electronic financial transactions was indefinite because the claim appeared to simultaneously claim

both the system (an apparatus) and a method for using the system (a method claim). *IPXL*

Holdings, L.L.C., 430 F.3d at 1384. The relevant *IPXL* claim, Claim 25, read as follows:

> The *system of claim 2* [including an input means] wherein the predicted transaction
> information comprises both a transaction type and transaction parameters associated
> with that transaction type, and *the user uses the input means* to either change the
> predicted transaction information or accept the displayed transaction type and
> transaction parameters.

Id. (emphasis added by the *IPXL* Court). The *IPXL* Court recognized that "'[a] claim is considered

indefinite if it does not reasonably apprise those skilled in the art of its scope.'" *Id.* at 1383-84

(citation omitted). The *IPXL* Court reasoned that claims that simultaneously claim both an

apparatus and a method for using the apparatus may be indefinite because they fail to apprise

manufacturers whether infringement occurs when one creates the apparatus or whether

infringement occurs when the user actually uses the apparatus. *Id.* at 1384. The *IPXL* Court held

that Claim 25 was indefinite because it claimed "both a system" (an apparatus) "and the method for

using that system." *Id.* (Claim 25 claiming "[t]he *system of claim 2* . . . wherein the predicted

transaction information comprises both a transaction type and transaction parameters . . ., and *the*

user uses the input means to" perform certain functions).

IPXL is not apposite here. As recognized by the District Court in *Datamize, LLC v.*

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Plumtree Software, the scope of *IPXL* is very narrow. *See id.*, No. C 04-2777 VRW, 2007 WL

5720627, at *12 (N.D. Cal. Aug. 7, 2007) (recognizing that "*IPXL* . . . [stands] for the narrow rule

that a single claim 'may not purport to cover a system, independent of any use of the system, and

simultaneously purport to cover a particular use of the system'" (quoting *Collaboration Props.,*

Inc. v. Tandberg ASA, No. C 05-01940 MHP, 2006 WL 1752140, at *7 (N.D. Cal. June 23,

2006))). Here, Defendants argue that the "transmit" and "receive" functional language "renders the

claims indefinite as hybrid apparatus / method claims." Resp. Br. at 18; *see also* '267 Patent at

14:60-15:21 (claiming a "node" that is configured to "transmit" and "receive" certain signals).

However, the transmit and receive language, unlike the language in *IPXL*, does not claim a use of

the node. Rather, this language provides additional information regarding the structure of the

"node" by describing the node's functionality. *Compare id. with IPXL*, 430 F.3d at 1384 (claiming

a "system" *and* the "user['s] use[] [of] the input means" (emphasis omitted)). The parties agree

that inventors are permitted to define the structure of their inventions by reference to its

functionality. *See* Opening Br. at 16; Resp. Br. at 19; *DePuy Spine, Inc. v. Medtronic Sofamor*

Danek, Inc., 469 F.3d 1005, 1021 (Fed. Cir. 2006) (holding that the phrase "for inserting said

screw" in claim described "a functional limitation that requires that the opening be capable of

inserting the screw"). Because the claim language at issue here does not simultaneously cover both

an apparatus and a use of that apparatus, Defendants' reliance on *IPXL* is misplaced. *See*

Datamize, 2007 WL 5720627, at *11-12 (holding that *IPXL* did not require a finding of

indefiniteness where claims claimed a "computer program storage medium" and described the

medium by "its function and capacity to store a program that carrie[d]" out a certain process).

4.   Conclusions Regarding Interface Term

For the reasons set forth above, the Court construes "interface [configured/controlled] by

the least one processor to [transmit and receive terms]" to mean "Electronic circuitry which is

configured/controlled by the processor(s) according to instructions in the memory, that allows the

processor(s) to communicate with a transceiver." As to the issue of patentable weight, this issue is

not properly addressed during claim construction, and the Court therefore rejects this argument at

this time. Finally, the Court rejects Defendants' indefiniteness argument.

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G.   "providing code to"

Terms in Dispute	GPNE's Proposed Construction	Defendants' Proposed Construction
"providing code to"	No construction necessary, or "capable of making instruction available to"	"Which is currently supplying code to"

The term "providing code to" appears in all three Patents. *See* Resp. Br. at 23. For

example, the '267 Patent discloses:

1. A first node in a data network, the data network including a plurality of nodes including a first node, the first node comprising:

at least one processor;

a memory **providing code to** the least one processor; and

an interface controlled by the least one processor to: . . .

See id. at 14:60-65 (emphasis added).

GPNE contends that this term does not need construction. Opening Br. at 17.

Alternatively, if the Court determines that the term "providing code to" does need construction,

GPNE contends that it should be construed as "capable of making instruction available to." *Id.*.

By "capable," GPNE appears to mean that the memory has been programmed with software that

provides instructions regarding how to transmit and receive the specific signals referenced in the

patents.[16]

Defendants contend that the use of the participle phrase "providing code to" requires that

the memory "actual[ly] perform[] . . . [this] function." Resp. Br. at 23. At the June 6, 2013

Markman hearing, Defendants explained that, in Defendants' view, it is not sufficient for the

device to merely be programmed to or configured to provide code to the processor.   Tr. at 111:9-

19, 118:9-12. Defendants contend that the "actual performance" standard is only met when the

device is actively providing code to the processor. *Id.* at 111:6-7, 117:25-118:3. In other words,

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[16] *See* Reply Br. at 16 (responding to Defendants' arguments regarding the "providing code to" and Interface terms and arguing that "a memory 'actually programmed' and thus *capable of* performing the claimed function, is a device *structured* to meet the functional element") (emphasis added by GPNE) (internal citation omitted); *id.* at 12 (stating that patents "disclose a combination of known hardware devices programmed with software to transmit and receive specific signals"); *id.* (referring to "the programmed signal capabilities" as the "guts of the claims").

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1   the device must "be on and operating." *Id.* at 117:25-118:12. The parties explained that this

2   nuance is significant because, even if the memory in a particular device is programmed to provide

3   code to the processor, whether it actually provides code to the processor may depend on factors

4   such as whether the user turns on the device and causes the device to transmit or receive data. *Id.*

5   at 110:22-111:12, 115:3-12. Thus, under Defendants' construction, Defendants would likely not be

6   liable for direct infringement (because Defendants' devices are not shipped in an active state), but

7   only for indirect infringement based on whether the user has activated his device and used it to

8   transmit data. *Id.* at 114:25-115:14, 117:2-6.

9   　　　　Defendants argue that their "actual performance" construction is supported by the "plain

10   language" meaning of "providing" and is in accord with the Federal Circuit's decision in *Typhoon*

11   *Touch Technologies, Inc. v. Dell, Inc. ("Typhoon II")*, 659 F.3d 1376, 1382 (Fed. Cir. 2011), as

12   well as the testimony of Dr. Dinan. *See* Resp. Br. at 23. GPNE disagrees that *Typhoon II* supports

13   the proposition that the memory must be in an active state of providing code to the processor (as

14   opposed to simply being actually programmed to provide code to the processor) for the claim

15   language to be satisfied. *See, e.g.*, Reply Br. at 15-17.

16   　　　　For the reasons set forth below, the Court agrees with GPNE that it is sufficient that the

17   memory must be "actually programmed" to provide code to the processor. However, because

18   GPNE's use of the word "capable" in its construction does not clearly require that the memory be

19   actually programmed to provide the code, the Court adopts the following construction of

20   "providing code to": "which is actually programmed to provide code to."

21   　　　　　　**1.　　　Claim Language and *Typhoon II***

22   　　　　Neither party cites any intrinsic evidence besides the claim language. Accordingly, the

23   Court's inquiry focuses on this language. The claim language uses the term "providing," which is

24   the present participle form of "provide." A participle is a verb that functions as an adjective. *See*

25   *Boston Scientific Corp. v. Micrus Corp.*, 556 F. Supp. 2d 1045, 1071-72 (N.D. Cal. 2008). In this

26   case, "providing code to" modifies and describes the memory.

27   　　　　Defendants take the position that, in light of the claim language's use of the participle form,

28   the "providing code to" requirement can only be satisfied if the device is in an active state of

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1   providing code to the processor. *Id.*; *see also* Resp. Br. at 23. Defendants contend that the claim

2   language is not satisfied if the memory is programmed to provide code to the memory but the

3   device is not in active state. Tr. at 111:6-7, 117:25-118:3. Defendants rely chiefly on the Federal

4   Circuit's decision in *Typhoon II* to support their interpretation of "providing code to."   *See* Resp.

5   Br. at 23. For reasons that will be set forth below, the Court is not persuaded that *Typhoon II*

6   supports Defendants' interpretation.

<div align="center">a)   Summary of the <i>Typhoon</i> Decisions</div>

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8   In *Typhoon II*, the Federal Circuit addressed the proper construction of the phrases

9   "operating in conjunction," "processor for executing," and "memory for storing."   *Id.*, 659 F.3d at

10   1380-82. Defendants appear to rely primarily on the portion of *Typhoon II* addressing "operating

11   in conjunction." *See* Resp. Br. at 23 (citing *Typhoon II*, 659 F.3d at 1382). Accordingly, this

12   Court begins its review of the *Typhoon* decisions with this term.

13   As set forth in the *Typhoon* district court's opinion, the term "operating in conjunction

14   with" appeared in the following contexts: (1) "an application generator **operating in conjunction**

15   with said operating system to generate said data . . . .", and (2) "a runtime utility **operating in**

16   **conjunction** with said processor to execute said application."   *Typhoon Touch Technologies, Inc.*

17   *v. Dell, Inc. ("Typhoon I")*, No. 6:07 CV 546, 2009 WL 2243126, at *12 (E.D. Tex. July 23, 2009)

18   (emphasis added). Typhoon argued that "operating in conjunction" described only a

19   "characteristic" of the device, such that the claim language would be satisfied so long as the

20   utility/generator was "*designed* to operate with the" processor/operating system even if the

21   utility/generator did not "actually operate" in this way. *Id.* (emphasis added).

22   The district court rejected this construction, ruling that the phrase "operating in

23   conjunction" was "not satisfied until the run-time utility . . . . or application generator is actually

24   operating." *Id.* at 13. The Federal Circuit affirmed the *Typhoon* district court's ruling. *Typhoon II*,

25   659 F.3d at 1381-82. However, the Federal Circuit framed the issue and its conclusions in a

26   slightly different fashion than the district court. As explained by the Federal Circuit, Typhoon's

27   proposed construction failed because, under that construction, the "operating in conjunction"

28   condition would be satisfied so long as the utility/generator "*can be* configured to operate in

<div align="center">36</div>

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1   conjunction" with the operating system/processor. *Id.* (emphasis added). Thus, the Typhoon's

2   construction would include devices that were not actually configured to operate in the fashion

3   described in the claims. *Id.* (stating that Typhoon's construction would apply to utilities/generators

4   regardless of "whether . . . they have been so configured in the device charged with

5   infringement."). Thus, the Federal Circuit held, the district court was correct in "holding that the

6   claims require actual adaptation, by program or configuration." *Id.* at 1382.

7   In addition to the phrase "operating in conjunction," in *Typhoon II*, the Federal Circuit

8   addressed the district court's constructions of two other similar phrases: (1) "processor for

9   executing," and (2) "memory for storing." *Id.*, 659 F.3d at 1380-81. With respect to the phrase

10 "memory for storing," the *Typhoon II* Court affirmed the district court's holding that this phrase

11 "requir[ed] that the memory is actually programmed or configured to store the data collection

12 application." *Id.* at 1381. Similarly, with respect to "processor for executing," the *Typhoon II*

13 Court rejected Typhoon's argument that "processor for executing," meant only "that the device has

14 the capability of being programmed or configured to execute the . . . application" and affirmed the

15 district court's holding that the term "requir[ed] that 'the recited function . . . be performed'." *Id.*

16 (quoting *Typhoon I*, 2009 WL 2243126, at *7).

17   **b)   Application to the Present Case**

18   Applying the *Tyhpoon* decisions to the instant case, the Court finds that *Typhoon* does not

19 support Defendants' proposed construction. As an initial matter, Defendants' reliance on *Typhoon*

20 is misplaced because, in that case, the Court's conclusions regarding the proper construction of

21 each of the terms at issue were not based on the claim language alone, but rather on the extensive

22 evidence drawn from the specification regarding the meaning of each disputed term. *See e.g.*

23 *Typhoon II*, 659 F.3d at at 1380-81 (analyzing language from the specification regarding the term

24 "memory for storing" and holding that "the specification is the primary source for determining

25 what was invented and what is covered by the claims"); *Typhoon I*, 2009 WL 2243126 at *12

26 (finding that "operating in conjunction" meant "actually operating" was supported by the portion of

27 "the specification describe[ing] that '[w]hen the computer . . . is turned on, its operating system is

28 loaded automatically in and the run-time process commences'"). Here, Defendants have not cited

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1   any evidence from the specification to support their proposed construction. Even putting this issue

2   aside, the Court is not persuaded that *Typhoon II* supports Defendants' proposed construction.

3   The Court acknowledges that the *Typhoon* Courts made statements indicating that a device

4   must actually perform a given function. *See Typhoon II*, 659 F.3d at 1381 (affirming district

5   court's holding that the phrase "processor for executing" "requir[ed] that 'the recited function . . .

6   be performed'"); *Typhoon I*, 2009 WL 2243126, at *13 (requiring that the utility/generator be

7   "actually operating"). However, the Court observes that, in *Typhoon*, the chief issue with

8   Typhoon's constructions was that they only required that the device be capable of being configured

9   or programmed to perform a given function, and did not require that the device actually be so

10   configured or programmed. *See Typhoon II*, 659 F.3d at at 1380 (rejecting Typhoon's argument in

11   connection with the phrase "memory for storing" that "it is irrelevant if the function is actually

12   performed by the device, if the device *can be* programmed or configured to perform the function"

13   (emphasis added)); *id.* at 1381 (rejecting Typhoon's argument in connection with the phrase

14   "processor for executing" that the device need not "be a device with a pre-programmed or pre-

15   loaded data collection application"); *id.* at 1381-82 (rejecting Typhoon's argument in connection

16   with the phrase "operating in conjunction with" that "it suffices if the computer-implemented

17   structures can be configured to operate in conjunction with each other, whether or not they have

18   been so configured"). While the *Typhoon* Courts did make statements suggesting an actual

19   performance requirement, it is not clear that the *Typhoon* Courts, particularly the Federal Circuit,

20   meant to imply that the claim language could only be satisfied by a device in an active state and

21   that the claim language would not also be satisfied by a device that was configured to perform the

22   relevant function but that is not in an active state, e.g., a device that is not turned on.

23   Indeed, this Court observes that, in at least one instance, the Federal Circuit in *Typhoon II*

24   used the phrases "actually perform" and "actually programmed" interchangeably. *See id.* at 1380

25   (noting that the district construed the claim terms "memory for storing," "processor for executing,"

26   and "operating in conjunction with" "as requiring that a device, to be covered by the claim,

27   *actually performs*, or is *configured or programmed to perform*, each of the functions stated in the

28   claim") (emphasis added). This suggests that the Federal Circuit did not draw the same distinction

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1   between performance and configuration that Defendants are attempting to draw in the instant case.

2   Thus, after a close reading of the *Typhoon* decisions, the Court finds that these decisions do

3   not stand for the proposition that the use of the participle phrase "providing code to" is only

4   satisfied when the memory is actually providing code to the processor, *i.e.* when the device is

5   active. Rather, the phrase "providing code to" means that the memory must be "configured or

6   programmed to" provide code to the processor. *Id.* As will be set forth below, this understanding

7   of the phrase "providing code to" is also consistent with the testimony of Dr. Dinan.

8   In Defendants' brief, Defendants also cite the district court's decision in *Imperium (IP)*

9   *Holdings, Inc. v. Apple Inc*. *See* Resp. Br. at 23-24 (citing *Imperium*, 4:11-CV-163, 2012 WL

10   6949611 (E.D. Tex. July 2, 2012), *report and recommendation adopted as modified*, 4:11-CV-163,

11   2013 WL 322053 (E.D. Tex. Jan. 28, 2013)). The *Imperium* Court held that terms such as "'setting

12   integration time,' 'providing data,' 'receiving test pixel data,' 'receiving photoelectrons,' etc." did

13   not merely require that the device be "'capable' of performing the function." *Id.*, 2012 WL

14   6949611 at *27-28. The *Imperium* Court held that these terms required that the aforementioned

15   terms described particular "states, not merely capabilities" and required that the functions "are

16   occurring or have occurred." *Id.* at *28. The *Imperium* Court distinguished the term "providing

17   data" from "language such as 'configured to….'," which might permit devices that were capable of

18   performing the recited function. *Id.* The *Imperium* Court stated that its ruling was required by

19   *Typhoon II* as well as the Federal Circuit's decision in *Ball Aerosol & Specialty Container, Inc. v.*

20   *Ltd. Brands, Inc.*, 555 F.3d 984, 994 (Fed. Cir. 2009). *Imperium*, 2012 WL 6949611 at *28

21   (stating that "*Ball Aerosol* and *Typhoon Touch* are binding authorities").

22   As set forth above, this Court finds that *Typhoon II* does not stand for the proposition that a

23   participle phrase such as "providing code to" requires actual performance as opposed to requiring

24   that devices be actually configured/programmed to perform the recited function. This

25   understanding is also in accord with *Ball Aerosol*. In *Ball Aerosol*, the Federal Circuit held that

26   claim language stating that certain "protrusions" on the end of a candle holder "must be 'resting

27   upon' the cover" was not broad enough to include devices which were not actually "configured" in

28   this manner, even though such devices were "reasonably capable of being configured" in this

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For the Northern District of California

manner. *Id.*, 555 F.3d at 994 (requiring that "the accused product [be] configured with the cover being used as a base underneath a candle holder with feet"). Here, GPNE does not dispute that the devices must be configured to provide code to the processor. Accordingly, the Court is not persuaded that either *Typhoon II* or *Ball Aerosol*, the two cases relied upon by the district court in *Imperium*, requires this Court to hold that "providing code to" requires that the function be "actually performed," in the sense that the device must be in an active state, rather than requiring that the memory be "actually programmed" to provide code to the processor.

2.   Extrinsic Evidence

Dr. Dinan's testimony also supports construing "providing code to" as requiring that the memory be actually programmed to provide code to the processor. At the outset, the Court notes that each of the claims featuring the "providing code to" language is an apparatus claim. In other words, each claim describes a structure, either a "node" or a "controller." *See* '267 Patent, Claims 1, 25, 30, and 39; '492 Patent, Claims 2, 11, 16, 19, 28, and 37; '954 Patent, Claims 12, 13, 23, 28, and 33.

As explained by Dr. Dinan, because the term "providing code to" appears in the context of apparatus claims, which claim structures, a POSA would understand the term as requiring that the "memory has a *structure* for providing the code." Dinan Dep. at 253:15-255:18 (emphasis added). A POSA would therefore understand the term "providing code to" as requiring that "memory has [the] code so it could provide it." *Id.* Dr. Dinan contrasted apparatus claims with method claims, which claim a series of "steps" that the individual or object practicing the method must undertake. *Id.* at 254:24-255:1. Dr. Dinan opined that when "providing" is used in the context of a method claim, it means that "the memory is going through [a] step" or is in "an active state" of providing code. *Id.* at 254:6-12, 254:24-255:8.

The Court finds Dr. Dinan's testimony to be persuasive. Given that the node and controller claim structures and not methods, a POSA would not view the term "providing code to" as imposing an "actual performance" requirement such that the claim language is not satisfied until the memory is actually prompted to provide code by the user or because of an incoming message from the controller. Rather a POSA would understand "providing code to" as requiring that the

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memory be programmed to provide code to the processor when called upon to do so.

3.   Conclusion Regarding "providing code to"

For the reasons set forth above, the Court concludes that "providing code to" does not

require that the memory actually perform the function of providing code to the processor. Rather,

this term requires that the device be programmed so that the memory provides code to the

processor when the "transmit" and "receive" functionality is engaged. Thus, the Court rejects

Defendants' proposed construction, which seeks to impose an actual performance requirement by

requiring that the memory be "currently providing code to."

In rejecting Defendants' proposed construction, the Court does not endorse GPNE's

construction. GPNE construes "providing code to" as "capable of making instruction available to."

The term "capable" may permit devices that *can be* programmed so that the memory provides code

to the processor even though such devices are not actually programmed in this manner. *See*

Typhoon II, 659 F.3d at 1380 (rejecting Typhoon's argument that "processor for executing" meant

only "that the device has the capability of being programmed or configured to execute the . . .

application"). Accordingly, to eliminate any ambiguity, the Court construes "providing code to" as

"which is actually programmed to provide code to."[17]

H.   "first grant signal including information relating to an allocation of a second slot to the first node for transmitting the reserve access request signal"

Terms in Dispute	GPNE's Proposed Construction	Defendants' Proposed Construction
"first grant signal including information relating to an allocation of a second slot to the first node for transmitting the reserve access request signal"	No construction necessary or, A "first grant signal" (*i.e.*, an initial signal that gives the node permission to transmit additional signals) includes information relating to allocating a second slot to the first node for transmitting the "reserve access request signal" (*i.e.*, a signal sent by the node using resources that are not shared with other nodes which includes	[First grant signal] including information identifying a slot to use for transmitting the 'reserve access request signal,' which the first node identifies as intended for it because the information is transmitted in the same timeslot within which the first node transmitted the 'random access request signal'

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[17] GPNE agrees that the memory must be "actually programmed" to provide code to the processor. *See* Reply Br. at 12, 16; Tr. at 115:18-22; 108:14-109:11.

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	information related to a node's request for the provision of additional resources for transmitting data packets).	

The term "first grant signal including information relating to an allocation of a second slot to the first node for transmitting the reserve access request signal" ("first grant term") appears in the '267 Patent and the '492 Patent. For example, the '267 Patent discloses:

1. A first node in a data network, the data network including a plurality of nodes including a first node, the first node comprising:

at least one processor;

a memory providing code to the least one processor; and

an interface controlled by the least one processor to:

…

receive a first grant signal subsequent to transmission of the random access request signal, said **first grant signal including information relating to an allocation of a second slot to the first node for transmitting the reserve access request signal** for transmitting first data packets containing a message;

…

See id. at 14:60-15:21 (emphasis added). Defendants request construction of this term to clarify the meanings of Claims 1, 30, and 39 of the '267 Patent and Claims 28 and 37 of the '492 Patent. Resp. Br. at 14.

GPNE's proposed construction is divided into three sections addressing the terms: (1) "first grant signal"; (2) "includes information relating to allocating a second slot to the first node for transmitting the"; (3) and "reserve access request signal" respectively. Opening Br. at 8. As noted by Defendants, two of these terms were "first grant signal" and "reserve access request signal" and were separately identified in the parties' Patent Local Rule 4-2 Disclosures and the Joint Claim Construction Statement as terms needing construction. *See* JCCS at 5. However, the parties did not identify these terms, pursuant to Patent Local Rule 4-3, as among the 10 most significant terms whose construction should be addressed at this time. *Id.* Defendants state that they therefore did not address the constructions of "first grant signal" or "reserve access request signal."

The Court agrees with Defendants that, in dividing its proposed construction of the first grant term into three parts and incorporating separate definitions for "first grant signal" and

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1   "reserve access request signal," GPNE is attempting to secure two additional constructions.

2   Because these terms were not identified as among the 10 terms to be construed and were not

3   addressed by Defendants, the Court will not address them either.

4   As to the larger phrase -- "first grant signal including information relating to an allocation

5   of a second slot to the first node for transmitting the reserve access request signal" -- the parties

6   appear to agree that the "information" in "information relating to an allocation of a second slot" is

7   the identity of a designated time slot in which the node may transmit future reserve access request

8   signals. *See* Resp. Br. at 14; Reply Br. at 9 (acknowledging that the information conveyed by the

9   first grant signal includes "the information granting the second [time] slot" which the node may use

10   to transmit "a later reserved request" signal). Thus, at the June 6, 2013 *Markman* hearing, GPNE

11   agreed to the portion of Defendants' proposed construction providing that the first grant term

12   "includ[es] information identifying a slot to use for transmitting the reserve access request signal."

13   Tr. at 157:17-22.

14   The parties' dispute is therefore focused primarily on the second clause of Defendants'

15   proposed construction, which requires that "the first node [must] identif[y] [the first grant signal]

16   as intended for" the first node based on the fact that "the information is transmitted in the same

17   timeslot within which the first node transmitted the 'random access request signal'." GPNE

18   contends that this clause attempts to read into the first grant term a limitation regarding "how a

19   node can identify the first grant" signal as being intended for that node. Reply Br. at 9. GPNE

20   argues that this is improper because the first grant term does not describe *how* the node identifies

21   itself as the proper recipient of the first grant signal, but rather describes the *content* (the "what") of

22   the first grant signal. *Id.* at 9-10. In other words, GPNE argues that the first grant term requires

23   only that the first grant signal include the identity of a time slot in which the node can transmit its

24   reserve access request signal, and that the first grant term does not impose a requirement that the

25   node identify the message as intended for the node based on the fact that the message was

26   transmitted in the same random time slot as the node used to transmit its original signal. *Id.*

27   For the reasons set forth below, the Court rejects Defendants' argument that the first grant

28   term should include a limitation relating to the means by which the node identifies the first grant

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signal as intended for the node. Thus, the Court construes the first grant term as "first grant signal including information identifying a slot to use for transmitting the reserve access request signal."

a)   Claim Language

As an initial matter, Defendants' proposed limitation regarding how the node identifies itself as the proper recipient of the first grant signal should be rejected because it is not supported by the claim language. The relevant language describes only the content of the information contained in the first grant signal. *See e.g.* '267 Patent at 15:5-8 ("first grant signal including *information* relating to an allocation of a second slot to the first node for transmitting the reserve access request signal") (emphasis added).[18] Thus, the Court finds that the claim language does not support Defendants' proposed construction.

b)   Specification

The specification similarly fails to support Defendants' proposed limitation. Defendants' attempt to support their proposed construction with language appearing in the portion of the specification describing the "[o]peration of [the] [s]econd [e]mbodiment." *See* '267 Patent at 11:4; Resp. Br. at 14 (citing '267 Patent at 11:59-64).

As set forth *supra*, in the second embodiment, when a "pager unit" enters an area controlled by a new control station, it transmits a request signal to the station in a random time slot. *See* '267 Patent at 11:43-51. The pager unit then waits for the station response to arrive from the station in the same time slot. *See id.* at 11:52-55. The specification provides that, in the second embodiment, the "pager unit . . . recognizes the [response] message as being addressed to [the] pager unit" based on the fact that the response, which the parties do not appear to dispute is the "first grant signal," is transmitted in the same "randomly generated" time slot as the pager used to transmit its original message. *Id.* at 11:59-64.

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[18] Indeed, the Court notes that in certain instances where the inventor intended to include a limitation regarding the means by which the node identifies itself, other, more explicit language was used. For example, Claim 39 of the '267 Patent includes express language stating that the node identifies the first grant signal as intended for the particular node using the randomly generated information. *See, e.g.*, '267 Patent at 19:23-29 ("[W]herein the random access request signal . . . includes randomly generated information . . . , and wherein the first grant returns said randomly generated information to the first node to enable identification of the first node as a desired recipient of the first grant.").

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1   Defendants argue that, in light of this discussion in the specification, the Court should

2   include in the construction of the first grant term Defendants' proposed limitation that the node

3   must identify the first grant signal as being intended for the node based on the time slot in which

4   the signal is sent. *See* Resp. Br. at 14-15. Defendants note that the specification discloses the

5   existence of other information, specifically each "pager unit['s] . . . preprogrammed . . .

6   identification serial number," '267 Patent at 4:20-23, that could be inserted in the first grant signal

7   and used to identify the intended recipient of the signal. *See* Resp. Br. at 15. Defendants argue

8   that the inventor's decision to use the randomly generated time slot, instead of some other

9   identifying information, as the mechanism for identifying the intended recipient of the first grant

10   signal in the second embodiment demonstrates an intent to limit the claims. The Court disagrees.

11   The claim language does not impose any limitations regarding *how* the first node identifies

12   itself as the intended recipient of the first grant signal. While the second embodiment supports

13   Defendants' construction, the Court cannot limit the claim language based on the description of an

14   embodiment unless "the patentee has demonstrated a clear intention to limit the claim scope using

15   'words or expressions of manifest exclusion or restriction.'" *Innova/Pure Water, Inc.*, 381 F.3d at

16   1117 (citations omitted). Here, there are no "words or expressions . . . manifest[ing]" a clear intent

17   to limit the claims based on the preferred embodiment. *Id.* The fact that the inventor chose to use

18   the randomly generated time slot as the identifying mechanism in the second embodiment, as

19   opposed to some other information, does not provide sufficiently clear evidence of an intent to

20   limit the claims. Accordingly, the Court rejects Defendants' argument that the specification

21   supports including Defendants' proposed limitation.[19]

22   Because Defendants' proposed limitation is not supported by the claim language or the

23   specification, the Court declines to include it in the construction of the first grant term.

24   Accordingly, the Court construes the first grant term as "first grant signal including information

25   _____

26   [19] Defendants also cite as support for their argument a statement by Dr. Dinan acknowledging that
     Defendants' construction of the first grant term, including the requirement regarding the method of
     identifying the intended recipient of the first grant signal, is consistent with the specification. *See*
27   Resp. Br. at 15 (citing Dinan Dep. at 168:14-25). This reference is unpersuasive. As set forth
     above, the Court will not limit the claims based on the embodiments in the specification unless
28   such embodiments "expressly or by clear implication restrict[s] the scope of the invention."
     Liebel-Flarsheim, 358 F.3d at 908

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identifying a slot to use for transmitting the reserve access request signal."

I.   Allocation of additional resources for transmitting the data packets/allocation of additional resources for transmitting the first data packets

GPNE Proposed Construction	Defendants' Proposed Construction
No construction necessary, or Should the court find construction necessary: "providing additional opportunities for transmitting the first data packets"	"assignment of a second dedicated frequency to the same node for transmitting the message, while retaining the assigned time slot for transmitting the 'reserve access request signal'"

The term "allocation of additional resources for transmitting the data packets/allocation of additional resources for transmitting the first data packets" appears in the '267 Patent and the '492 Patent. For example, the '267 Patent discloses:

1. A first node in a data network . . . comprising:

at least one processor;

a memory providing code to the least one processor; and

an interface controlled by the least one processor to:

…

receive a second grant signal subsequent to transmission of the reserve access request signal, said second grant signal including information relating to an **allocation of additional resources for transmitting the first data packets**…

…

See id. at 14:60-15:21 (emphasis added). Defendants request construction of this term to clarify the meanings of Claims 1, 30, and 39 of the '267 Patent and Claims 28 and 37 of the '492 Patent. Resp. Br. at 11.

Defendants contend that "allocation of additional resources for transmitting the first data packets" should be construed as the "assignment of a second dedicated frequency to the same node for transmitting the message, while retaining the assigned time slot for transmitting the 'reserve access request signal.'" *Id.* At the June 6, 2013 *Markman* hearing, Defendant clarified that "dedicated" is meant to imply that the frequency assigned for the transmission of the data packets is not also used to transmit reserve access request signals and other control signals.[20] *See* Tr. at

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[20] The term "control signal" may be found in Defendants' briefing. *See* Resp. Br. at 13.

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1   183:3-16; Resp. Br. at 13 (contrasting between data packets with reserve access request signals and

2   other "control signal[s] that are used by the pager in the process of requesting resources from the

3   control station . . . ."). Defendants also appear to view the term data as applying to "pager status

4   data" as well as "alphanumeric data." Resp. Br. at 13.

5   GPNE maintains that the term does not need construction or that, if it does, it should be

6   construed only as "providing additional opportunities for transmitting the first data packets."

7   Opening Br. at 18. Notably, at the June 6, 2013 *Markman* hearing, GPNE agreed that the

8   additional resource is a frequency. Tr. at 179:23-180:6. However, GPNE disputes whether this

9   frequency must be "dedicated" to the transmission of "data packets." *See id.*; *id.* at 184:1-16.

10   Thus, the parties' dispute as to the proper construction of this term turns on two issues.

11   First, the parties dispute whether the additional resource assigned for the transmission of the data

12   packets must be a *dedicated* frequency. Resp. Br. at 11.   Second, the parties dispute whether the

13   node must "retain[] the assigned time slot for transmitting the 'reserve access request signal.'" *Id.*

14   The Court addresses each of these issues in turn.

1.   Allocation of a dedicated frequency

a)   Claim Language

16   The Court first turns to the claim language. Significantly, the claims in the '267 and '492

17   Patents generally do not include any limitations regarding the frequency upon which messages and

18   other signals are transmitted. *See, e.g.*,'267 Patent at col. 14:60-15:16 ("**1.** A first node in a data

19   network . . . to: receive a second grant signal subsequent to transmission of the reserve access

20   request signal, said second grant signal including information relating to an allocation of additional

21   resources for transmitting the first data packets." (emphasis in original)).   Where such limitations

22   were intended, explicit language was used. For example, Claim 39 of the '492 Patent expressly

23   provides that "the aligning signal . . . the reserve access request signal . . . [and] the data packets

24   are transmitted . . . on differing frequencies . . . ." '492 Patent at 21:44-51.[21] Thus, the claim

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[21] Plaintiffs note that Claim 2 of the '267 Patent, which depends on Claim 1, adds the limitation
that "the first grant, the reserve request signal, the second grant signal, and the first data packets
[must be] provided on differing frequencies." *Id.* at 15:22-24. However, as noted by Plaintiffs, the
purpose of a dependent claim is to add limitations which are *not* already present in the independent
claims. Thus, it would be improper to infer from Dependent Claim 2 that, in Claim 1, the first data

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1   language does not expressly support Defendants' position that, in all instances, the additional

2   resource must be a "dedicated" frequency.

3   While not cited by the parties, the Court additionally observes that Claim 38 of the '267

4   Patent, which depends from Claim 30, and Claim 36 of the '492 Patent, which depends from Claim

5   28, expressly claim nodes "wherein the first data packets are transmitted in at least one slot

6   separate from the recurring second slot . . . ." '267 Patent at 18:61-62; '492 Patent at 21:6-7. The

7   "second slot" is the time slot in which the node transmits its "reserve access request signal." *See,*

8   *e.g.*, '267 Patent at 18:4-9; '492 Patent at 18:9-15. The statement that the "data packets may be

9   transmitted in [a] … slot separate from the . . . second slot," '267 Patent at 18:61-62, suggests that,

10   in the embodiment claimed by the dependent claims, data packets are transmitted on the same slot-

11   divided frequency that is used to transmit the reserve access request signal and need not be

12   transmitted on a dedicated frequency. Given that independent claims are broader in scope than

13   dependent claims, it follows that the "additional resources" referred to in the independent claims of

14   the '267 Patent and '492 Patent need not be a dedicated frequency. *Cf Specialty Composites v.*

15   *Cabot Corp.*, 845 F.2d 981, 988 (Fed. Cir. 1988) (referring to the "broader independent claims").

16   Thus, the Court finds that the claim language fails to support Defendants' argument that the

17   additional resources must be a dedicated frequency. Resp. at 13.

18   **b)   Specification**

19   The specification also fails to support Defendant's proposed limitation. In support of

20   Defendants' position, Defendants identify a statement describing the first embodiment: "The third

21   frequency (f_3) carries pager status data and alphanumeric data from paging unit **22** to central

22   control station **20**. The fourth frequency (f_4) carries a pager request signal from paging unit **22** to

23   central control station **20**." *Id.* at 4:37-41; *id.* at 6:21-23 ("At step **138**, central control

24   station **20** receives a communications message on frequency f_3 sent from the sending (e.g.,

25   requesting) pager unit **22**."). Even assuming *arguendo* that this statement supports Defendant's

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27   packets must be transmitted on a different frequency than the control signals. *See Specialty*
           Composites v. Cabot Corp., 845 F.2d 981, 988 (Fed. Cir. 1988) ("An accepted rule of claim
28   construction suggests that, since the dependent claims 8 and 16 add an external plasticizer as a
           limitation, the broader independent claims 1 and 11 do not have this limitation.") (citation omitted).

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1   position, the statement appears in the context of describing a preferred embodiment and does not

2   clearly limit the scope of the overall invention. *See, e.g.*, *Innova/Pure Water*, 381 F.3d at 1117.[22]

3   The Court additionally notes that, under the "Summary" heading, the specification provides

4   that: "a third local frequency carries communication packets from the pager units to the central

5   control station[,] and a fourth local frequency carries a status or request signal from the paging

6   units to the central control station." '267 Patent at 2:3-9 ("Summary Statement"). The Court

7   acknowledges that this statement, which, unlike the statement above, is not specifically associated

8   with an embodiment, describes communications data as being sent on the third frequency and

9   request signals as being sent on a separate, fourth frequency. However, it is clear that the purpose

10   of this statement is to impose a limitation on invention that would prohibit communications data

11   from being transmitted on the same frequency as the request signal. Accordingly, the Court

12   declines to adopt Defendants' construction based on this statement.[23]

13   Thus, for the reasons set forth above, the Court finds that the specification does not support

14   Defendants' proposed construction wherein the resource assigned for the transmission of the first

15   [22] Defendants also appear to argue that the frequency on which communications data is transmitted
     cannot be the same as the frequency on which control signals, like the reserve access request
16   signal, are transmitted because control signals are transmitted on the fourth frequency, which is
     divided into time slots, and the specification does not discuss transmitting communications on a
17   frequency which is divided into time slots. *See* Resp. Br. at 12-13. The fact that the specification
     does not discuss transmitting communications data in a time slot does not foreclose the possibility
18   that the Patents encompass within their scope inventions wherein communications data is
     transmitted in a time slot. *See, e.g.*, *SunRace Roots Enter. Co., Ltd. v. SRAM Corp.*, 336 F.3d 1298,
19   1305 (Fed. Cir. 2003) ("'An applicant is not required to describe in the specification every
     conceivable and possible future embodiment . . . .'" (citation omitted)). Moreover, as discussed
20   *supra*, several of the dependent claims in the '267 and '492 Patents expressly state that data may be
     transmitted in time slots.
21   [23] Moreover, construing the Summary Statement as prohibiting the transmission of data packets on
     a non-dedicated frequency would be inconsistent with the first embodiment. The Summary
22   Statement describes "status . . . signals" as being transmitted on the fourth frequency. '267 Patent
     at 2:6. However, the description of the first embodiment provides that "pager status data" is
23   transmitted on the "third frequency . . . ." *Id.* at 4:37-41. While it is not clear from the
     specification, it appears that the term "*status* . . . signal[]," *id.* at 2:6 (emphasis added), describes
24   the signal upon which "pager *status* data," *id.* at 4:37-41 (emphasis added), is transmitted. *See* Tr.
     at 181:23-182:11 (acknowledging that signals are the means by which data is transmitted on a
25   frequency); Resp. Br. at 13 (describing "'pager status *data* and alpha numeric *data*'" as "two
     signals" (citation omitted)). Thus the terms "status signal" and "pager status data" both appear to
26   describe the status information. Given that the specification describes status information as being
     sent on the third frequency in the Summary Statement and status information as being sent on the
27   fourth frequency in the first embodiment, it does not appear that frequencies are limited to carrying
     one type of information. *See id.* at 2:6, 4:37-41. This undermines Defendants' contention that the
28   data packets cannot be transmitted on a frequency that also transmits control signals.

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data packets must be a "second dedicated" frequency.

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c) Other Evidence

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Defendants argue that their position that the additional resource assigned for the

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transmission of the data packets is a dedicated frequency is also supported by the deposition

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testimony of Gabriel Wong, the original inventor. The Court disagrees. During his deposition, Mr.

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Wong remarked that the third frequency was used "to transmit pager status and alphanumeric data"

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and that request signals were transmitted on the fourth frequency. *See* Green Decl., Ex. 16 (Wong

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Deposition Transcript) at 100:22-101:8. However, Mr. Wong also explicitly caveated that he was

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commenting on the "preliminary . . . [patent] disclosure" he gave to his lawyer in 1994 and that the

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patent subsequently "evolved." *Id.* at 99:21-100:12. Accordingly, the Court is not persuaded that

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Mr. Wong's statements provide a sufficient basis to conclude that data packets containing

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communications/messages may only be transmitted on a frequency which is dedicated for this

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purpose. *Cf id* at 99:18-20 (discussing the functions of the first frequency and what information is

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conveyed on that frequency and remarking that "[a]s far as I can recall now, the system is

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flexible…it can do other things"). Defendants' proposed construction is also undermined by the

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testimony of Dr. Dinan. *See* Dinan Decl. ¶ 57 (stating that the specification does not restrict "the

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possibility that a particular frequency could, for example, contain other types of signals, if needed"

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and that providing different types of signals on the same frequency was "the norm in prior large-

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scale communication systems as it is in the present").

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d) Conclusions Regarding Dedicated Frequency

For all the reasons set forth above, the Court concludes that the allocated resource need not

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be a "dedicated" frequency as Defendants contend. Plaintiffs have proposed that the allocation of

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additional resources term be construed as resources "providing additional opportunities for

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transmitting the first data packets." Opening Br. at 18. However, this construction is ambiguous to

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the extent it fails to explain what "opportunities" means. Accordingly, the Court will incorporate

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the following language into the construction of "additional resources for transmitting the data

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packets": "assignment of a frequency[24] to the same node for transmitting the message."

2. Retention of Assigned Time Slot

With respect to whether or not a node must retain its assigned reserve access time slot, GPNE concedes that nodes "may regularly keep" their time slot and use this same time slot to transmit additional requests to the control station. Reply Br. at 7. However, GPNE takes issue with including Defendants' proposed limitation -- "while retaining the assigned time slot for transmitting the 'reserve access request signal'" -- because there are circumstances in which a node might change its time slot, *e.g.* when the node goes into another cell, goes idle, shuts-down, or goes in "any other number of states where a new reserved access slot would be assigned." Opening Br. at 21 (citing Dinan Decl., ¶ 59).[25] Moreover, GPNE argues that, even if Defendants' construction was modified to acknowledge the circumstances under which a node may change its time slot, Defendants' retention of time slot limitation would still be inappropriate because this characteristic of the device is not relevant to the claim term being construed -- allocation of additional resources for transmitting the data packets. *See* Tr. at 190:15-22. GPNE argues that Defendants are attempting to "read[] in a separate concept." *Id.* at 200:4-5. For the reasons set forth below, the Court rejects Defendants' retention of time slot limitation.

The claim language provides that a node may be assigned "additional resources for transmitting the first data packets." *See, e.g.*, '267 Patent at 15:15-16. Defendants contend that the word "additional" means that the new resource is being added to the previous resources such that the node must "maintain[] . . . the previously allocated resource[]," the second slot. Resp. Br. at 12 (internal quotation marks omitted). GPNE argues that the term additional is simply intended to indicate that the new resource is: (1) not the time slot that was used to transmit the request signal,

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[24] The Court notes that some of Defendants' arguments seem to suggest that the allocation of a frequency cannot include the allocation of a time slot on frequency that is divided into time slots. *See* Resp. Br. at 12-13. In stating that the additional resource is a "frequency," this Court is not excluding inventions where a time slot on a time-divided frequency is assigned.

[25] Defendants dispute that the device necessarily gets a new time slot when it is turned off and powered back on or when the device returns from an idle state. *See* Tr. at 193:15-194:11 (discussing Figure 5 and noting that the "Turn 'Off'" and "Turn 'On'" boxes on the program flow chart do not lead to the "Change to New Time Slot" box); *see also* '267 Patent, Fig. 5. Defendants acknowledge, however, that a device receives a new time slot when it enters a new cell. *See* Tr. at 197:21-23.

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1   and (2) being used "for a separate new purpose," specifically the transmission of data packets.

2   Reply Br. at 9. Ultimately, the Court finds that the meaning of the term "additional" in the claim

3   language is ambiguous. It is not clear that the term is being used to indicate that the node must

4   retain its previously allocated resource. Consequently, the Court declines to adopt Defendants'

5   proposed limitation based solely on the use of the term "additional" in the claim language.

6   Defendants also contend that the specification describes the pagers as retaining their time

7   slots for use in transmitting future request signals and that this factor supports Defendants'

8   proposed construction. *See* Resp. Br. at 12 (citing '267 Patent at 6:60-62, 8:37-41, and 12:12-16).

9   However the statements Defendants rely upon describe the preferred embodiments and are not

10   clearly limiting. *See Innova/Pure Water, Inc.*, 381 F.3d at 1117. Moreover, the specification

11   describes circumstances in which the pager changes time slots. *See, e.g.*, '267 Patent at 8:34-41

12   (discussing the "time slot changing sub-routine"); *id.*, Fig. 5 (diagramming sequence of events that

13   occur when a pager changes its time slot).

14   Finally, Defendants argue that GPNE's statements during the re-examination of the '492

15   Patent support Defendants' proposed limitation. *See* Resp. Br. at 12 (citing Green Decl., Ex. 15 at

16   12). Specifically, Defendants refer to statements by GPNE distinguishing the prior art. In the prior

17   art system, a new "channel" would be assigned as a replacement for a previously allocated channel

18   for the purpose of voice communications. Green Decl., Ex. 15 at 12. In distinguishing this art

19   GPNE stated:

20   The ASSIGNMENT COMMAND message presumably carries information about a
          new channel. Although a channel can be viewed as a "resource," it is certainly not

21   "an additional resource." This is because the mobile station has the same
          communication resources before and after the channel change. At best, this new

22   channel would simply be a replacement for a previously allocated resource, and not
          an "additional resource."

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24   *Id.* Defendants argue that these statements show that, in GPNE's view, the "allocation of

25   *additional* resources requires retaining any *previously allocated* resources." Resp. Br. at 12.

26   GPNE responds that its distinction between GPNE's invention and the prior art was that, in

27   the prior art, the new resource (the new channel) is assigned to carry out the "same task" as the old

28   resource (voice communications). Reply Br. at 8. GPNE argues that, in its invention, the

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1   additional resources are not used for the same purpose as the previous resources (transmitting the

2   reserve access request signal) and are instead used for a new purpose (transmitting data packets).

3   The Court is skeptical of GPNE's explanation. Indeed, certain portions of GPNE's re-examination

4   statement strongly suggest that GPNE viewed the term "additional" as requiring that new resources

5   are being added to the old resources, which are retained. *See* Green Decl., Ex. 15 at 12 (stating that

6   the new channel is not an additional resource "because the mobile station has the same

7   communication resources before and after the channel change."). Nevertheless, it would not be

8   proper for the Court to limit the claims based on GPNE's statement unless those statements clearly

9   support the limitation. *See Cordis Corp. v. Boston Scientific Corp.*, 561 F.3d 1319, 1329 (Fed. Cir.

10   2009) ("A disclaimer must be 'clear and unmistakable,' and unclear prosecution history cannot be

11   used to limit claims." (citation omitted)). In this case, GPNE did not make a clear and

12   unmistakable disclaimer that "additional" means the node must retain its time slot.

13   Accordingly, for the reasons set forth above, the Court rejects Defendants' retention of time

14   slot limitation.

3.   Conclusion re: the Allocation of Additional Resources Term

16   For the reasons set forth above, the Court construes "allocation of additional resources for

17   transmitting the data packets/allocation of additional resources for transmitting the first data

18   packets" as meaning: "An assignment of a frequency to the same node for transmitting the

19   message."

J.   "clocking signal"

GPNE Proposed Construction	Defendants' Proposed Construction
A signal that contains timing information used for allocating resources	A signal generated by a clock unit

24   The term "clocking signal" appears in all three Patents. For example, the '267 Patent

25   discloses:

26   4. The first node of claim 1, wherein the interface is further configured to receive a clocking
             signal with which the first node can synchronize signals.

27   *Id.* at 14:30-32 (emphasis added). Defendants request construction of this term to clarify the

28   meanings of Claim 4 of the '267 Patent and Claim 13 of the '954 Patent. Resp. Br. at 8.

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1   The parties' proposed constructions differ in two key respects. First, Defendants'

2   construction includes the limitation that the signal must be generated by a specific piece of

3   hardware, a "clocking unit." Second, GPNE's construction states that the content of the signal is

4   "timing information" that is "used for allocating resources." The parties each contend that

5   additional language included by the other party is improper for various reasons. *See* Opening Br. at

6   22-23; Resp. Br. at 8-11. For the reasons set forth below, the Court construes "clocking signal" as

7   "a signal that, among other things, contains timing information used for allocating resources."

8   The Court addresses in turn: (1) GPNE's proposal that the construction of clocking signal

9   disclose that it "contains timing information used for allocating resources," and (2) Defendants'

10   proposal that the construction disclose that the signal is "generated by a clock unit."

11   **1.   GPNE's Proposed "Timing Information" and "Allocating Resources" Language**

12   **a)   Intrinsic Evidence and GPNE's Statements at the June 6, 2013 *Markman* Hearing**

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14   At the June 6, 2013 *Markman* hearing, Defendants agreed that GPNE is correct that the

15   clocking signal may contain timing information used for allocating resources. *See* Tr. at 158:24-

16   160:9. The claim language and the specification also support this conclusion. *See, e.g.*, '267

17   Patent at 4:47-49 ("The predetermined time slot on frequency f_4 is related to the clock-aligning

18   signal (carried by frequency f_1) . . . ."); *id.* at 16:17-19 ("The first node of claim 15, wherein the

19   interface is further configured to receive a clocking signal with which the first node can

20   synchronize signals."); '492 Patent at 21:62-64 (stating that the "aligning signal[1]" is used to

21   "synchronize signals"); '954 Patent at 17:22-24 (same); *id.* at 16:59-60 (stating that the "clocking

22   signal is used to enable requests including a first request from the first node"); *id.* at 2:15-17

23   (disclosing that each node receives a time slot in which it may transmit reserve access requests).

24   Defendants nevertheless argue that the Court should not adopt GPNE's construction

25   because it implies that the clocking signal is only used for timing information and to allocate

26   resources. *See* Tr. at 158:24-160:9; Resp. Br. at 11 (arguing that the "clocking signal 'does not

27   have to be used to allocate resources'") (quoting Dinan Dep. at 92:24-93:8). GPNE agrees that its

28   construction may be modified to state, "the signal that, *among other things,* contains timing

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information used for allocating resources." *See* Tr. at 172:15-19 (emphasis added). The Court

finds this amendment sufficient to address Defendants' concern that the clocking signal may be

used for purposes other than to allocate resources.

b)   GPNE's Alleged Disclaimer

In Defendants' briefing, Defendants also argued that GPNE's inclusion of the "timing

signal" language is improper because GPNE's language is intended to serve as "a proxy for [the

concept of] 'synchronization'." Resp. Br. at 9. Defendants argue that the concept of

"synchronization" is important "because it maps the 'clocking signal' to an aspect of the accused

GPRS protocol known as a 'synchronization burst.'" *Id.* Defendants argue that this is improper

because GPNE "clearly disavowed 'synchronization signals' from the scope of its claims." *Id.*

Defendants argument is based on several amendments made during the course of

prosecuting the Patents. Defendants note that, in prosecuting the '954 Patent, GPNE amended its

claims to replace "request-enabling-synchronization signal" with "clocking signal" in response to

concerns expressed by the Examiner that a "request-enabling-synchronization signal" was not

disclosed in the written description (the term "clocking signal" was disclosed in the description).

See, e.g., Green Decl., Ex. 12 at GPNECorp. 00000772; *id.*, Ex. 14 at GPNECorp. 0000082.

Furthermore, Defendants note that, in addressing issues relating to the term "aligning signal"

during the pending re-examination of GPNE's '492 Patent, GPNE indicated that it agreed with

Defendants that "synchronization and alignment are different." *Id.*, Ex. 15, ECF No. 72-16 at 12 of

31 ("[B]y the Requestor's own admission in District Court, synchronization and alignment are

different"). Defendants' reliance on these references is misplaced.

First, as set forth above, the claim language and specification make clear that "clocking

signal" provides "timing information." *See, e.g.*, '267 Patent at 4:47-49, 16:17-19; '492 Patent at

21:62-64; '954 Patent at 17:22-24, 16:59-60. Assuming *arguendo* GPNE disclaimed the concept

of synchronization, the Court is not persuaded that the construction should not disclose that the

clocking signal is used to provide "timing information" simply because the phrase "timing

information" is similar to the term "synchronization."

Second, it is not clear that GPNE disclaimed the concept of synchronization. *See Verizon*,

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1   503 F.3d at 1306 ("To operate as a disclaimer, the statement in the prosecution history must be

2   clear and unambiguous, and constitute a clear disavowal of scope." (citations omitted)). While

3   GPNE was required to remove the term "request-enabling-synchronization signal," GPNE was not

4   required to remove the numerous other descriptions of the clocking signal as a synchronizing signal

5   in the claim language. *See, e.g.*, '267 Patent at 17:34-36 (referring to "a clocking signal with which

6   the first node can synchronize signals"); '492 Patent at 21:62-64; '954 Patent at 17:22-24.

7   Third, with respect to GPNE's statement during the recent reexamination that

8   "synchronization and alignment are different," *see* Green Decl., Ex. 15 at 12 of 31 ("Further, by the

9   Requestor's own admission in District Court, synchronization and alignment are different"),

10   Defendants' reliance on this statement is misplaced. As set forth above, the fact that Defendants

11   believe that the phrase "timing information" comes too close to the concept of synchronization

12   does not provide a sufficient basis to exclude the phrase "timing information" for the construction

13   of "clocking signal" to the extent that phrase is otherwise accurate. Moreover, GPNE's reference

14   to "synchronization" in the cited statement was not meant to disclaim or distinguish

15   synchronization as a general concept. Rather GPNE was distinguishing its clocking signal from

16   the "synchronization channel"/"SCH" "burst," a specific concept found in certain prior art. *See id.*

17   ("According to page 206, mobile stations sporadically receive a burst from SCH to synchronize

18   with adjacent cells in preparation for a handoff. *Mouly* describes this procedure as 'pre-

19   synchronization.' This does not appear to be an 'aligning signal which enables the mobile station

20   to transmit' SERVICE REQUEST."). Thus, the Court is not persuaded that GPNE has generally

21   disclaimed that its clocking signal may be used to synchronize the devices with the controllers or

22   that the phrase "timing information" should be excluded from the construction of clocking signal.

23   **c)   Conclusion re: "Timing Information" and "Allocating
                          Resources"**

24   For the reasons set forth above, the Court concludes that the construction of "clocking

25   signal" should disclose that it is a "signal that, among other things, contains timing information

26   used for allocating resources." The Court proceeds to consider whether the construction of

27   clocking signal should, as Defendants contend, disclose that the signal is generated by a clock unit.

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2. Defendants' Argument that the "Clocking Signal" is Generated by a "Clock Unit"

a) Claim Language/Specification

The claim language does not disclose that the clocking signal is generated by a clock unit. Nevertheless, the specification states in the "Detailed Description" that the clocking signal is generated by the clocking unit. *See*, *e.g.*, '267 Patent at 3:27-29 ("Central control station **20** also includes a clock unit **59** which generates a local clock signal f_1clk (which, in turn, is used to modulate frequency f_1)."); *id.* at 4:8-10 (stating that the "clock unit **87** generates a local clock signal"). However, the "Detailed Description" appears to describe the preferred embodiments. *See, e.g.*, *id.* at 2:63-67 ("Detailed Description[.] FIG. **1** shows a central control station **20** according to a first embodiment of the invention; FIG. **2** shows a paging unit **22** suitable for use with central control station **20**."). Thus, the Court cannot conclude that the statements regarding the "clocking signal" contained therein are limiting, *i.e.* that the clocking signal *must* be generated by a clock unit. *See Innova/Pure Water, Inc.*, 381 F.3d at 1117 (holding that "particular embodiments appearing in the written description will not be used to limit claim language that has broader effect"). Nevertheless, because the specification acknowledges that, in at least one embodiment, the clocking signal is generated by a clock unit, it follows that the clocking signal *may* be generated by a clock unit.[26]

b) GPNE's Remaining Arguments

In GPNE's Opening Brief and at the June 6, 2013 *Markman* hearing, GPNE argues that, while it is technically accurate to say that the clocking signal can be generated by a clock unit, describing the clocking signal in terms of its source shifts the focus away from *what* the clocking signal is to *how* it is generated. *See* Tr. at 171:7-24. GPNE also argues that inserting the term "clock unit" into the construction of "clocking signal" does little to clarify the meaning of clocking signal because it leaves the question open as to what a clock unit is. *See id.* at 168:13-17. The

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[26] Dr. Dinan's testimony similarly supports the conclusion that a clocking signal may, but need not be, generated by a clock unit. *See* Dinan Decl. ¶ 38 (stating that it is "technically accurate" that a clock unit is "*one way* to create a type of clocking signal disclosed in the patent," but cautioning that the clocking signal is not properly "understood" as a signal generated by a clock unit, but rather "as a type of synchronization signal . . . [that allows] nodes and the central control station [to] be aligned in time").

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1   Court agrees with the latter argument. While it is true that the clocking signal may be generated by

2   a clock unit, the addition of the undefined term "clock unit" does little to clarify what a clocking

3   signal is. Moreover, unlike the word "pager" discussed *supra* in connection with the term "node,"

4   the term "clock unit" is not essential to the definition of "clocking signal" because the clocking

5   signal need not necessarily be generated by a clock unit. Given that: (1) the clocking signal need

6   not be generated by a clock unit, and (2) the term clock unit is itself undefined and therefore does

7   little to clarify the meaning of clocking signal for jurors, the Court declines to include "clock unit"

8   in the construction of "clocking signal." However, Defendants are not precluded from arguing

9   during trial that the clocking signal may be generated by a clock unit.

3.   Conclusion Regarding "Clocking Signal"

For the reasons set forth above, the Court construes "clocking signal" as "a signal that,

among other things, contains timing information used for allocating resources."
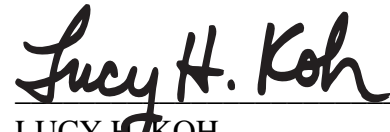
II.   CONCLUSION

For the reasons discussed above, the Court construes the disputed claim terms as follows:

Claim Language	Construction
"node"	"pager with two-way data communications capability that transmits wireless data communications on a paging system that operates independently from a telephone network."
"frequency"	"a number expressed in hertz"
"randomly generated information"	"[i]nformation that is randomly generated."
"count value"	"[t]he number of consecutively related packets emanating from a transmitter"
"interface[configured/controlled] by the at least one processor to [transmit and receive terms]"	"Electronic circuitry which is configured/controlled by the processor(s) according to instructions in the memory, that allows the processor(s) to communicate with a transceiver"
"providing code to"	"which is actually programmed to provide code to"
"first grant signal including information relating to an allocation of a second slot to the first node for transmitting the reserve access request	"first grant signal including information identifying a slot to use for transmitting the reserve access request signal"

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signal"	
"allocation of additional resources for transmitting the data packets/allocation of additional resources for transmitting the first data packets"	"An assignment of a frequency to the same node for transmitting the message."
"clocking signal"	"A signal that, among other things, contains timing information used for allocating resources."

IT IS SO ORDERED.

Dated: August 13, 2013

_____
LUCY H. KOH
United States District Judge

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